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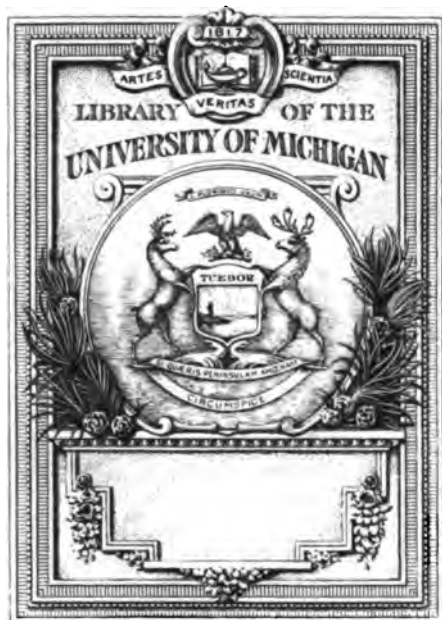
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JOINT DOCUMENTS

JOINT DOCUMENTS
OF THE
STATE OF MICHIGAN

FOR THE YEAR 1890

IN FIVE VOLUMES

VOL. III.



BY AUTHORITY

LANSING
ROBERT SMITH & CO., STATE PRINTERS AND BINDERS
1891

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FIFTY-FOURTH ANNUAL REPORT
OF THE
SUPERINTENDENT OF PUBLIC INSTRUCTION
OF THE
STATE OF MICHIGAN
WITH
ACCOMPANYING DOCUMENTS
FOR
THE YEAR 1890



BY AUTHORITY

LANSING
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1891

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STATE OF MICHIGAN
DEPARTMENT OF PUBLIC INSTRUCTION
Lansing, December 31, 1890

To His Excellency, CYRUS G. LUCE,
Governor of the State of Michigan:

SIR—In compliance with the provisions of law, I have the honor
with to transmit through you to the Legislature, the annual report of the
Superintendent of Public Instruction, together with the accompanying
documents, for the year 1890.

Very respectfully,

Your obedient servant,

JOSEPH ESTABROOK

Superintendent of Public Instruction

SUPERINTENDENT'S REPORT.

EXAMINATION IN THEORY AND ART OF TEACHING.

The lack of professional training of even the most elementary character on the part of applicants for county teachers' certificates has long been apparent, and the question of how best to inaugurate a reform in this regard has been one of the leading considerations with our most advanced educators and progressive county secretaries. It is manifestly impossible for the great mass of the teachers of the State to pursue a course of professional instruction in the State Normal School, or in the colleges which include normal instruction in their course of study. The facilities are inadequate to furnish such instruction to even a small portion of the teaching force of the State, and even if the opportunities were sufficient, only a few could afford to devote the time and money necessary to such a course. It follows that with most of the applicants for certificates, training in the purely professional branches is limited to individual reading and study. The necessity for some preparation along this line is becoming more generally recognized. Supt. Draper of New York, in a recent address before the Massachusetts State Teachers' Association refers to this tendency as follows: "The doctrine is now generally declared and commonly accepted, that something more than scholarship is imperatively necessary to the equipment of a good teacher. He must be an expert in his knowledge of human nature; he must know about the developing processes of the human mind; he must understand the philosophy of education, and be acquainted with the history of educational work; he must not only be familiar with the best methods for transmitting knowledge and stimulating intellectual activity, but he must discriminate among methods, and be able to employ the best at the right time, so as to wisely develop and direct individuality, and get the best results attainable under all the circumstances of each case."

To induce teachers to at least take a step in the direction of the ideal pictured by Dr. Draper by reading some approved book or books on psychology and pedagogy, it was decided to base the questions for examination in theory and art upon the study of the elements of these branches. With this end in view, the following circular was issued and distributed through the county secretaries:

Circular No. 6.

STATE OF MICHIGAN,
DEPARTMENT OF PUBLIC INSTRUCTION, }
Lansing, Mich., May 20, 1890.

To Applicants for Teachers' Certificates:

During the past few years examinations in Theory and Art of Teaching have been quite desultory in their character. This has been made necessary by a seeming want of preparation upon this subject on the part of applicants for certificates. The time seems to have come for a better order of things in this respect. Beginning, then, with the regular examination of August 7, 1890, the questions in Theory and Art of Teaching will be as full and complete, and will require as exact a knowledge of the subject as in any other branch.

The following outline of examinations is presented to teachers as a guide in preparing themselves in the topic. In order that the change of method may not be a hardship to applicants the questions for fall examinations will simply cover Part I of the outline. Spring examinations, and examinations following, will be upon the entire subject.

JOSEPH ESTABROOK,
Superintendent of Public Instruction.

OUTLINE OF EXAMINATIONS IN THEORY AND ART OF TEACHING.

PART I.—THE MENTAL FACULTIES.

Define and explain:

1. THE PRESENTATIVE POWER,
Consciousness.
Sense perception.
Intuition.
2. THE REPRESENTATIVE POWER,
The memory.
Imagination.
3. THE THOUGHT POWER,
Conception.
Judgment.
The reason, { Induction.
 { Deduction.

ACTIVITY AND GROWTH OF MENTAL POWERS; THE ORDER AND METHOD OF DEVELOPMENT.

READ—White's Elements of Pedagogy, Pages 20 to 95; Swett's Method of Teaching, Pages 54 to 63; Putnam's Elementary Psychology, Pages 1 to 106; or any other elementary work on Psychology.

PART II.—THE PRINCIPLES OF TEACHING—END AND MEANS OF EDUCATION.

Explain and illustrate the following:

1. The end sought in education.
2. The means of attaining these ends.

PRINCIPLES OF TEACHING.

Explain and illustrate:

1. Adaptation, in matter and method, to the capability of the pupil.
2. Natural order of development.
3. Harmonious development of all powers of the intellect.
4. Knowledge only imparted by occasioning activity in the mind of the pupil.
5. First concepts and ideas in each branch must be taught objectively in all grades.
6. The powers of the mind developed and educated by causing their natural and harmonious activity.
7. The mind should be guided by clear and correct ideals.

READ—Elements of Pedagogy, White, Pages 97–130; or any similar work on the subject.

PART III.—METHODS OF TEACHING.*Explain and discuss:*

1. DEFINITION OF TERMS USED.
2. GENERAL METHODS OF TEACHING.

Analytic or Synthetic.
Inductive or Deductive.

3. DISTINCT TEACHING PROCESSES.

1. Instruction.
Objective, Indirect, Direct.
2. Drill.
3. Testing.

The Use of Books

Its purpose and value.

Oral Teaching and Book Study.

The relation of the two methods and how they are to be used in conjunction in various grades.

The Classes of Teaching Exercises.

The lesson—Its Aim and Methods.

The Recitation.

Its Objects and Aims.

Methods of Testing. { The question method.
The topic method.

Methods of Calling on Pupils.

Written Examinations.

The Teacher's Preparation.

READ—White's Elements of Pedagogy, Pages 133-215; Page's Theory and Practice, Pages 75-139; or any work on Pedagogy covering this ground.

PART IV.—SCHOOL MANAGEMENT AND DISCIPLINE.*State, define or explain:***SCHOOL GOVERNMENT.**

The requisites in the teacher.

Means of securing order.

Punishments—Proper; improper.

*Extent and limitation of a teacher's authority:***MORAL TRAINING IN THE SCHOOLS.**

The Will.

The training of the will.

School incentives.

The religious motive.

Religion in the schools.

SCHOOL MANAGEMENT.

Plan of daily work.

Registration and Records.

Arrangement and care of school houses.

Relation of teacher to parents of pupil.

READ—Page's Theory and Practice, Pages 148-269; Swett's Method of Teaching, Pages 78-119; or any work on Pedagogy covering the same ground.

PART V.—METHODS OF TEACHING SPECIAL BRANCHES.*State and explain principles and methods of teaching the following:*

READING.

ARITHMETIC.

LANGUAGE.

ENGLISH GRAMMAR.

GEOGRAPHY.

U. S. HISTORY AND CIVIL GOVERNMENT.

READ—Swett's Method of Teaching; White's Elements of Pedagogy; or any similar book on Methods of Teaching.

HISTORY OF THE GRADED SCHOOLS OF MICHIGAN.

Under the general term primary schools are embraced all the district schools of the State both common and graded. At the time of the organization of our school system under the direction of our first State Superintendent, Rev. John D. Pierce, who was also the first State Superintendent in the United States, the general classes of schools existing in this country were common schools, academies and colleges. In our original plan our common schools were designed to be simply common schools in which instruction for all people should be provided in those elementary branches known as common school studies. The secondary or academic grades were thought to be adequately provided for in chartered and private academies and seminaries; and in branches of the University in which there were in all eight, located as follows: at Detroit, Kalamazoo, Monroe, Niles, Pontiac, Romeo, Tecumseh and White Pigeon. It was believed that the University would furnish ample opportunities and facilities for all who might desire to pursue a collegiate course and attain the degrees conferred upon the completion of such a course.

At a later period in the history of our educational development it came to be felt that the provisions for secondary education and preparation for college in branches of the University, academies, and in private or select schools, as they were generally called, was entirely inadequate, and in many cases utterly beyond the reach of the poorer classes. From this felt necessity arose the so-called union schools, which have combined the work of the select schools, the academy and the branches with the common school. The high school department of the union school furnishes the best facilities for secondary education and for preparation for the higher education of the colleges and has thus far done away with the branches which were at best but poor apologies for the work for which they were designed, the unendowed academies, too expensive for the masses and poorly equipped for their work, and the select schools, which were too often in charge of those who had failed to obtain a certificate or could not succeed in other schools. The superiority of this plan over the independent schools named was quickly perceived and the union schools came rapidly into favor.

It may be proper here to remark that the terms "union" and "graded" school have come to mean essentially the same thing. The union school is always a graded school though the grading in early days was often very imperfect and inefficient. The name "union" school is simply the appellation for any public school that has been separated into two or more departments taught by different teachers either in separate buildings or different rooms in the same building. The term "union" expresses more distinctly the act of uniting two or more separate districts into one while the term "graded" has more special reference to the changes wrought in the internal condition and working of the school, when the organization has been completed and the work begun.

A graded school is one in which pupils are grouped in classes according to their attainments and in which all pupils of the same class are taught together and thus pursue the successive parts of a systematic course at the same time. If the course embraces a period of ten years, each year's prescribed course is called a grade. This is the common plan of division. In some schools the whole curriculum of study is divided into three periods of four years each, known respectively as primary, grammar and high

school grades. The essential principle is to divide the whole course into a series of ascending steps, each leading to the next in regular succession, so that each pupil must complete the course prescribed for the lower grade before he can be admitted with profit to the succeeding one.

Within the memory of many present it was the custom to hear each pupil recite his lesson individually whenever it was prepared, with the exception of such branches as reading, spelling and writing. The teacher must set all the copies, make and mend all the pens from the goose quill, hear each pupil by himself from the abecedarian to the largest boy who spent most of his time "doing sums." At length it began to be discovered that much time might be saved, and better work accomplished by acting upon masses at the same time. Classes began to be formed, those pursuing the same branches were grouped together, and a definite period assigned to each group for recitation.

The advantages of the graded over the former system, if indeed it could be called a system, began fifty years ago to receive attention of educators in different parts of the country. The great waste of time and poor returns for money expended began to attract the attention of thoughtful men, who were applying the principles of economy to industrial pursuits. In the same village, for instance, were two schools, each having a single teacher and twenty classes reciting daily and ranging in studies from primary reading to advanced arithmetic and English grammar. Let these two schools be united. The two classes in arithmetic, geography, grammar, reading, spelling and writing would be merged each into one, so that there would still be only twenty classes, though enlarged in numbers. And each teacher, instead of dividing his time among the whole number, giving to each an average of fifteen minutes, would have only one-half as many classes and could give twice the amount of time to each. A larger number of pupils in the same school would admit of a still further subdivision of grades and a corresponding increase of time devoted by the teacher to each class and pupil.

The movement toward the union school plan was almost simultaneous in a number of states. One of the first of these was organized at Geneva, New York, about 1840 and was frequently referred to as a model. Another in Lyons was equally successful. The two districts of that village of about two thousand inhabitants were consolidated in the autumn of 1843. A brick building of seven school rooms with recitation rooms, library etc., was erected at the cost of \$7,000. The average attendance was about five hundred. Pupils were arranged according to advancement into four different grades, each grade into two departments, male and female and each department was under the direction of a separate teacher. A principal had supervision of all the departments. That school combined all the advantages of the well conducted common school, the academy for young men, and the seminary for young ladies. Children could commence with the alphabet, and pass by regular steps from one grade to another, until on leaving the school they were prepared to enter any college in the land. The fame of these schools went abroad and attracted public attention. About the same time a similar movement was commenced in our own State. In February, 1842, the following act was passed and approved relative to free schools in the city of Detroit: "That the city of Detroit be considered as one school district, and hereafter all schools organized therein in pursuance of this act shall under the direction and regulation of the board of education, be public and free to all children residing

within the limits thereof, between the ages of five and seventeen years inclusive." By the same act the authorities were authorized to enforce a tax of one dollar for each child in the city between the ages of five and seventeen, for the benefit of the schools. The first general State law looking to the union plan was passed as a permissive act in the session of 1843, and reads as follows: "The said board of any township in which is a city or village, if they deem that the interests of the school will be promoted thereby, shall form a single district out of any two or more school districts in any such village or city of this State, shall classify the pupils of such district according to age and require that such pupils shall be taught in distinct schools as classified by them and such district may have the same number of school houses and raise the same amount of taxes which the original districts forming the same could raise if not united. This law has been modified from time to time to meet the demands of the schools which have been established and have grown to their present proportions under the wise and liberal provisions of these laws.

The development of the union and graded schools of our State is one of the marvels in our educational history. "In pursuance of the enabling act of 1843, on the 28th of May, 1844," says Witter J. Baxter, of Jonesville, "the expediency of establishing and sustaining a union school of a character to meet the entire wants of our community in that regard were fully met. It was finally resolved by a large majority to be both feasible and expedient, and that no time should be lost in making the necessary preparations. A suitable house must be erected. Accordingly a brick house 32x60 and two stories high was completed and the school went into operation on the first of January, 1848, under the management of the pioneer principal of the first union school of Michigan outside of Detroit, Prof. A. S. Welch, who afterward became the first principal of the State Normal School, and the third school of that rank on this continent. Mr. Welch was in charge of the union school of Jonesville until the summer of 1849, when he resigned on account of his health. The school year was divided into two terms of twenty-two weeks each, and the entire amount paid for teachers' wages for the first year was \$900. Rev. C. S. Kingsley was his successor and continued until the spring of 1850."

Mr. Baxter further says that special attention was paid to those who were advanced and were preparing to teach. Classes in Latin, Greek, Spanish, algebra, chemistry, geometry, etc., have been advanced considerably beyond what is usually required for admission to an advanced class in college, and yet there has been no lack of attention to minor branches. The school board affirm as the result of this experiment that "the experience of this school has shown that as a matter of economy alone it is poor policy to employ cheap teachers; that when the district has paid the highest wages and secured experienced and highly educated teachers the cost of tuition per scholar has been lowest."

The union school in Ypsilanti, known in the earlier period as the "Union Seminary" was organized in 1848, but did not go into operation under the new organization until 1849. The building first occupied had for a number of years been used as a seminary under the control of the Baptist denomination. It was purchased by the school district and the school was organized and commenced its work. Chauncey Joslin in his report of 1852 says: "It was a bold and in some respects an unprecedented experiment, undertaken by one district alone and involving an amount of pecuniary responsibility which nothing but zeal in the cause of education could

have induced its projectors to assume. Two years later a second district was united with the first, and for a time it was sustained by the united efforts of the two. Some four years later the remaining two districts were consolidated, and since that time the school has been an important factor in the educational history of the State. Nearly fifteen years of my own life were identified with that institution."

About the same time, 1849 to 1850, Grand Rapids, Adrian, Ann Arbor, Port Huron, Flint, and Kalamazoo organized and soon took high rank among the schools of the State. The first term of Battle Creek union school closed December 24, 1851. The friends of education in that place made a strenuous effort as early as 1844 to organize a union school but they were bitterly opposed and their efforts to raise sufficient funds to execute their plans were delayed, but by months of earnest effort and thorough public discussion the victory came.

Between 1850 and 1860 the Saginaws and Bay City, together with many of the more important villages of our State were thoroughly organized and have for years been doing grand work for the cause of popular education.

We associate with this early effort to build the modern system of popular education, which is the crowning glory of our State, the names of Father Pierce, Ira Mayhew, John M. Gregory, Welch, Hawley, Nichols, Barstow, Van Buren, Hinsdale, Hubbard, Corbin, Briggs, Abbott, Ripley, Travis, Lawton, Danforth and others, many of whom sleep but some remain.

Notice some of the advantages of this plan. We can see that the work of instruction and training conforms to the great law which prevails in all well regulated industries, that of the division of labor, which so eminently distinguishes the present from all previous periods of the world's history, and has become a distinguishing characteristic of our modern civilization. By this system a teacher's time, talent and energies are devoted to a prescribed range of duties which become easy by repetition, and hence will be likely to be performed in a more thorough and efficient manner.

In this subdivision of work advantage is taken also of a teacher's fitness for special branches of study, as well as their ability to teach and manage the younger pupils as well as those of a more adult age. Some who have succeeded but indifferently in one grade have proved themselves eminently successful in another. Pupils under such a system derive peculiar advantages from greater thoroughness of instruction and completeness of the course, since a reasonable degree of efficiency in one grade becomes necessary to promotion to a higher. At the same time there is no unbridged chasm in the course of instruction.

Under this system all the school exercises and arrangements may be better adapted to the ages and capacities of the different classes of pupils. The primary department with its shorter recitations, more frequent changes of classes, longer recesses, its concert exercises and songs may be made far more pleasing and healthful as well as profitable and attractive, while the older and more advanced pupils, relieved from the restlessness and noise of the little ones are left in quiet for longer recitations and severer studies.

Further, under the graded system the advantages of higher education are brought within the reach of all the children of the district, without regard to parentage or wealth. The children of the rich and poor mingle in the same classes, contend for the same rank and are molded and inspired by the same influences and opportunities, and so the children are assimilated and brought into harmony with the genius and spirit of our institutions.

These graded school districts, being larger and more populous, susceptible of more economic grading and more thorough division of labor are able to furnish longer terms of school, better and more commodious houses, more complete appliances for illustration and experiment without adding seriously to the burdens of the people. While the district schools of the State are kept from three to eight months in the year, the graded schools are in session from nine to ten. This greater permanency and higher rank of our graded schools have invited into the field a better qualified class of teachers. The school that requires from four to ten or more teachers can employ as principal or superintendent a man or woman of liberal learning and culture whose influence will be felt by the youngest pupil in the lowest department of the entire school. The association of several teachers in the same school will mutually aid and stimulate one another while the solitary teacher of the district school with few or no opportunities for consultation with those in the same work must lack one of the strongest incentives to earnestness and improvement in his calling.

At the same time the graded schools are far more easily and better governed than the common district school. The division of the school into departments composed of nearly the same age and attainments makes it possible for the government of each department to be adapted to the age and necessities of the pupils and the higher character and broader culture of the teachers employed, the presence and coöperation of several teachers working toward the same end render the result certain.

The union school has vindicated its claim to public confidence and support by the most practical of all tests—that of its fruit. Henceforth we must look to these schools to supply the demand of the masses for higher intermediate education. I count the most beautiful feature, nay, the consummate glory of our school system that from the very midst of our primary schools there should grow up these free academies that with open doors invite the masses of our youth to enter and drink of their pure waters, without distinction of rank or race, and I deem it the highest honor of my life that for fifty years I have given my best energies to this work.

EDUCATIONAL FUNDS.

THE PRIMARY SCHOOL FUNDS.

The money derived from the sale of school lands, and from escheats to the State constitute the primary school fund proper, and bear seven per cent interest. The moneys derived from the sale of swamp lands donated by congress, constitute the primary school five per cent fund.

The interest derived from each of these funds, together with the surplus of specific taxes remaining in the State treasury after paying the interest on the several educational funds and the interest and principal of the State debt, forms the primary school interest fund, the entire amount of which, that may be on hand at the time, is apportioned to the school districts of the State semi-annually, between the first and tenth days of May and November in each year.

The condition of these funds on the thirtieth day of June, 1890, is shown by the following statement:

The Primary School Funds.

Primary School 7 per cent fund:

In the hands of the State June 30, 1890.....	\$3,566,388 93
Due from purchasers of lands June 30, 1890.....	187,837 73

Total 7 per cent fund June 30, 1890..... \$3,754,226 66

Primary School 5 per cent fund:

In the hands of the State June 30, 1890.....	\$795,991 61
Due from purchasers of lands June 30, 1890.....	13,217 85

Total 5 per cent fund June 30, 1890..... 809,209 46

Total school funds June 30, 1891..... \$4,563,436 12

Primary School Interest Fund.

Interest paid by the State on 7 per cent fund.....	\$247,490 00
Interest paid by holders of lands on 7 per cent fund.....	15,310 15

Total interest on 7 per cent fund..... \$262,800 15

Interest paid by the State on 5 per cent fund..... 39,688 12

Total income from both funds..... \$302,488 27

Surplus of specific taxes transferred..... 489,393 20

Rent of land..... 1 00

Paid by trespassers on school land..... 1,180 00

Sale of hay..... 3 00

Total primary school interest fund..... \$793,065 47

The University Fund.

The income derived from the University fund from July 1, 1889, to June 30, 1890, and the amount standing to the credit of the fund on the latter date, was as follows:

In the hands of the State June 30, 1890.....	\$515,087 85
Due from purchasers of lands June 30, 1890.....	30,958 62

Total fund..... \$546,046 47

Interest paid by the State..... \$35,984 64

Interest paid by holders of lands..... 2,305 08

Total income..... \$38,289 72

The Agricultural College Fund.

This fund, derived from the sale of lands granted by the State and by the general government for the support of the College, draws 7 per cent interest. The state of the fund at the close of the last fiscal year was as follows:

In the hands of the State June 30, 1890.....	\$373,610 84
Due from purchasers of lands June 30, 1890.....	105,029 41

Total fund..... \$478,640 25

Interest paid by the State..... \$25,653 31

Interest paid by holders of lands..... 6,877 52

Paid by trespassers on lands..... 20 00

Total income..... \$32,550 83

The Normal School Fund.

This fund, bearing 6 per cent interest, is derived from the sale of salt spring lands, granted by the State for the support of a normal school. The condition of this fund and its income at the close of the last fiscal year was as follows:

In the hands of the State June 30, 1890.....	\$63,960 12
Due from purchasers of land, June 30, 1890.....	5,596 42
Total funds.....	<u>\$69,556 54</u>
Interest paid by the State.....	\$3,821 81
Interest paid by holders of lands.....	408 93
Total income.....	<u>\$4,230 74</u>

Very respectfully,

JOSEPH ESTABROOK,

Superintendent of Public Instruction.

STATISTICAL TABLES.

STATISTICAL TABLES.

TABLE I.

Comparative Summary of Statistics for the Years 1889 and 1890.

Items.	1889.	1891.	Increase.	Decrease.
<i>Districts and Schools.</i>				
Number of townships and independent districts reporting.....	1,286	1,241	5	-----
Number of graded school districts.....	503	518	15	-----
Number of ungraded school districts.....	6,642	6,655	13	-----
Total	7,145	7,168	23	-----
School census of graded school districts	329,184	347,487	18,303	-----
School census of ungraded school districts	310,885	307,015	-----	3,870
Total	640,069	654,502	14,433	-----
Enrollment in graded schools	201,067	208,214	7,127	-----
Enrollment in ungraded schools	222,517	218,818	-----	3,699
Total	423,604	427,032	3,428	-----
Percentage of attendance in graded schools	61.	59.9	-----	1.1
Percentage of attendance in ungraded schools	71.5	70.1	-----	1.4
Percentage for the State	66.2	65.2	-----	1.
Number of districts reporting having maintained school	7,046	7,074	28	-----
Average duration of schools in months in graded schools	9.4	9.5	.1	-----
Average duration of schools in months in ungraded schools	7.6	7.7	.1	-----
Average for the State	7.7	7.8	.1	-----
Number of private and select schools reported	312	314	2	-----
Number of men teachers in such schools	277	296	19	-----
Number of women teachers in such schools	422	483	61	-----
Estimated number of pupils attending such schools	34,179	38,975	-----	204

TABLE I.—Continued.

Items.	1889.	1890.	Increase.	Decrease.
<i>Teachers and their Employment.</i>				
Number of teachers necessary to supply graded schools	4,017	4,277	260	-----
Number of teachers necessary to supply ungraded schools	6,620	6,654	34	-----
Total	10,637	10,931	294	-----
Number of men teachers employed in graded schools	631	637	6	-----
Number of men teachers employed in ungraded schools	3,000	2,874	-----	126
Total	3,631	3,511	-----	120
Number of women teachers employed in graded schools	3,520	3,739	219	-----
Number of women teachers employed in ungraded schools	8,874	8,690	-----	184
Total	12,394	12,429	35	-----
Whole number of teachers employed in graded schools	4,201	4,426	225	-----
Whole number of teachers employed in ungraded schools	11,874	11,564	-----	\$10
Total	16,075	15,990	-----	85
Average number of months taught by men in graded schools	8.9	9	.1	-----
Average number of months taught by men in ungraded schools	4.7	4.8	.1	-----
General average	5.5	5.6	.1	-----
Average number of months taught by women in graded schools	9.3	9.4	.1	-----
Average number of months taught by women in ungraded schools	4.2	4.3	.1	-----
General average	5.7	5.8	.1	-----
Total wages of male teachers in graded schools	\$467,366 55	\$490,032 31	\$22,666 76	-----
Total wages of male teachers in ungraded schools	462,291 71	445,840 31	-----	\$16,451 40
Total	\$929,658 26	\$935,873 62	\$6,215 36	-----
Total wages of female teachers in graded schools	\$1,323,432 89	\$1,443,094 89	\$114,662 00	-----
Total wages of female teachers in ungraded schools	934,423 70	947,818 53	12,394 83	-----
Total	\$2,257,856 59	\$2,390,913 42	\$127,556 83	-----

COMPARATIVE STATISTICS.

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TABLE I.—Continued.

Items.	1889.	1890.	Increase.	Decrease.
Aggregate wages of all teachers in graded schools.....	\$1,795,799 44	\$1,933,128 20	\$137,328 76	
Aggregate wages of all teachers in ungraded schools.....	1,306,715 41	1,323,158 84		\$3,556 57
Total	\$3,102,514 85	\$3,326,287 04	\$123,712 19	
Average monthly wages of male teachers in graded schools.....	\$77 35	\$78 81	\$1 46	
Average monthly wages of male teachers in ungraded schools.....	32 95	32 31		\$0 64
Average wages of male teachers in all schools.....	\$46 31	\$46 76		\$0 45
Average monthly wages of female teachers in graded schools.....	\$40 65	\$40 94	\$0 29	
Average monthly wages of female teachers in ungraded schools.....	25 01	25 22	21	
Average wages of female teachers in all the schools.....	\$33 33	\$32 75	\$0 43	
<i>Examination and Certification of Teachers.</i>				
Number of public examinations held.....	489	487		2
Number of applicants for regular certificates.....	15,979	16,667	688	
Number of first grade certificates granted.....	206	211	5	
Number of second grade certificates granted.....	554	560	6	
Number of third grade certificates granted.....	10,361	10,453	92	
Whole number of regular certificates granted.....	11,121	11,224	103	
Number of applicants for special certificates.....	1,363	1,339		29
Number of special certificates granted.....	1,143	1,080		63
Number teaching who held State or Normal School certificates.....	403	408	5	
Whole number of legally qualified teachers.....	11,581	11,946	365	
Number licensed without previous experience in teaching.....	2,599	2,554	155	
Number of applicants who had attended State Normal School.....	2,216	1,463		753
Number of applicants who had attended Institutes during the year.....	5,084	5,233	249	
<i>School Property.</i>				
Number of frame school houses.....	5,798	5,818	22	
Number of brick school houses.....	1,199	1,232	33	
Number of stone school houses.....	71	69		2
Number of log school houses.....	427	412		15
Total	7,493	7,531	38	
Whole number of sittings in school houses.....	543,707	552,496	8,789	
Estimated value of property in graded school districts.....	\$9,100,437 00	\$9,540,702 00	\$440,265 00	
Estimated value of property in ungraded school districts.....	4,286,300 00	4,817,925 00	31,725 00	
Total	\$13,386,637 00	\$13,558,627 00	\$471,990 00	

TABLE I.—Continued.

Items.	1889.	1890.	Increase.	Decrease.
Number of districts reporting dictionaries in school	4,178	4,485	307	
Number of districts reporting globes in school ..	2,070	2,589	519	
Number of districts reporting maps in school ..	2,873	3,554	681	
<i>Financial.</i>				
Balance on hand from preceding year	\$681,587 24	\$1,096,840 35	\$214,253 11	
Amount of one mill tax received	672,466 00	658,306 11		\$14,159 88
Amount of primary school interest fund received ..	827,773 44	795,813 47		31,959 97
Amount received from non-resident tuition	56,108 35	57,815 57	1,712 22	
Amount received from district taxes	3,396,080 29	3,451,729 93	55,649 64	
Amount received from all other sources	536,775 21	708,620 77	167,845 56	
Total resources	\$6,968,734 62	\$6,763,125 20	\$394,390 58	
Amount paid male teachers	\$629,721 11	\$634,644 07	\$4,922 96	
Amount paid female teachers	2,263,314 00	2,899,287 66	125,423 68	
Amount paid for building and repairs	641,661 48	894,590 35	252,928 87	
Amount paid on bonded indebtedness	827,865 32	349,442 84	21,857 52	
Amount paid for all other purposes	1,117,327 17	1,130,963 90	13,636 73	
Balance carried to next year	1,068,325 54	1,064,316 86		\$24,009 18
Total expenditures, including balance on hand	\$6,968,734 62	\$6,763,125 20	\$394,390 58	
Total expenditures in graded school districts ..	\$3,280,019 15	\$3,732,408 61	\$452,389 46	
Total expenditures in ungraded school districts ..	2,000,389 93	1,966,400 23		\$33,989 70
Total net expenditures	\$5,280,409 08	\$5,698,808 84	\$418,399 76	
Total bonded indebtedness of districts	\$1,622,014 71	\$1,661,247 08	\$39,232 32	
Total floating indebtedness of districts	146,740 12	204,260 15	57,510 03	
Total indebtedness	\$1,768,754 83	\$1,865,497 18	\$96,742 35	
Total indebtedness in graded school districts ..	\$1,429,819 55	\$1,616,272 46	\$186,452 91	
Total indebtedness in ungraded school districts ..	338,935 28	249,224 72		\$89,710 56
Total indebtedness	\$1,768,754 83	\$1,865,497 18	\$96,742 35	
Total amount due the districts	\$145,883 95	\$185,937 99	\$40,104 04	
<i>School Libraries.</i>				
Number of townships reporting libraries	505	498		7
Number of districts of 100 children or more reporting libraries ..	819	837	18	
Number of districts of less than 100 children reporting libraries ..	786	762		24
Total number of libraries	1,610	1,597		13
Number of volumes in township libraries	142,101	151,118	9,017	
Number of volumes in districts of 100 or more children	275,883	311,184	35,351	
Number of volumes in districts of less than 100 children	46,648	48,418		3,290
Total number of volumes in all the libraries ..	464,583	506,720	41,138	

COMPARATIVE STATISTICS.

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TABLE I—Continued.

Items.	1880.	1890.	Increase.	Decrease.
Amount of taxes voted for township libraries.....	\$4,700 97	\$3,446 49	-----	\$1,254 48
Amount received from county treasurers for township libraries.....	28,803 75	26,500 72	-----	1,803 03
Number of townships diverting money to general school purposes.....	481	475	-----	6
Number of townships forfeiting library moneys.....	247	249	-----	2
Amount paid for support of township libraries.....	\$14,576 04	\$17,083 69	\$2,157 65	-----
Amount paid for support of district libraries.....	69,502 45	70,810 43	807 97	-----
<i>Teachers' Institutes.</i>				
Number of State institutes held.....	72	68	-----	4
Number of men enrolled at such institutes.....	1,587	1,746	159	-----
Number of women enrolled at such institutes.....	5,010	6,072	1,062	-----
Total enrollment.....	6,597	7,818	1,221	-----
Amount received from State Treasurer for such institutes.....	\$1,917 47	\$1,848 72	-----	\$78 75
Amount received from county treasurers for such institutes.....	9,478 76	10,118 19	\$639 43	-----
Total amount expended.....	\$11,896 23	\$11,961 91	\$65 68	-----
<i>Miscellaneous.</i>				
Number of counties reporting county teachers' associations.....	58	55	-----	3
Amount of per diem received by examiners.....	\$10,958 72	\$9,794 64	-----	\$1,164 08
Amount paid secretaries of county boards for salaries.....	62,060 00	63,350 00	\$1,290 00	-----
Total compensation.....	\$73,018 72	\$73,144 64	\$125 92	-----
Amount allowed by supervisors for expenses of county boards.....	\$3,687 14	\$4,866 21	\$1,179 07	-----
Amount paid and due township inspectors for services.....	14,928 72	14,247 65	-----	\$681 07
Amount paid chairmen of boards of inspectors.....	28,781 75	16,249 15	-----	7,532 60
Total amount of primary school interest fund apportioned.....	\$922,449 88	\$848,726 76	-----	\$73,723 07
Rate per capita, May apportionment.....	\$0 78	\$0 56	-----	\$0 17
Rate per capita, November apportionment.....	74	77	\$0 03	-----
Rate per capita for year.....	\$1 47	\$1 33	-----	\$0 14

TABLE II.

Tenth Semi-Annual Apportionment of the Primary School Interest Fund, May 1 1890; Rate per Capita, 56 cents.

Counties.	Whole number of children.	Number included in apportionment.	Amount apportioned
Totals.....	630,327	630,329	\$356,719
Alcona.....	1,492	1,474	\$825
Alger.....	278	278	155
Allegan.....	12,588	12,511	7,006
Alpena.....	5,174	5,128	2,871
Antrim.....	3,106	3,069	1,735
Arenac.....	1,711	1,711	958
Baraga.....	1,148	1,084	607
Barry.....	7,670	7,670	4,296
Bay.....	18,197	18,083	10,068
Benzie.....	1,629	1,629	912
Benning.....	12,619	12,619	7,066
Branch.....	7,633	7,633	4,274
Calhoun.....	12,500	12,455	6,974
Cass.....	6,045	6,045	3,335
Charlevoix.....	3,135	3,126	1,750
Cheboygan.....	3,579	3,569	1,998
Chippewa.....	3,297	3,288	1,813
Clare.....	1,923	1,917	1,073
Clinton.....	8,538	8,458	4,736
Crawford.....	742	722	404
Delta.....	4,166	4,082	2,235
Eaton.....	9,670	9,670	5,415
Emmet.....	3,511	2,494	1,396
Genesee.....	11,555	11,535	6,470
Gladwin.....	899	876	490
Gogebie.....	1,972	1,904	1,066
Grand Traverse.....	3,916	3,916	2,192
Gratiot.....	9,380	9,380	5,241
Hillsdale.....	8,667	8,658	4,848
Houghton.....	11,908	10,927	6,119
Huron.....	10,741	10,741	6,014
Ingham.....	10,641	10,641	5,958
Ionia.....	9,800	9,739	5,453
Iosco.....	4,293	4,293	2,404
Iron.....	1,036	958	536
Isabella.....	6,255	6,217	3,481
Isle Royal.....			
Jackson.....	12,674	12,674	7,097
Kalamazoo.....	11,511	11,467	6,421
Kalkaska.....	1,543	1,524	853
Kent.....	30,506	30,506	17,083
Keweenaw.....	952	952	533
Lake.....	2,059	2,052	1,149
Lapeer.....	9,949	9,949	5,571
Leelanau.....	2,683	2,610	1,461
Lenawee.....	13,982	13,982	7,829
Livingston.....	6,351	6,319	3,538
Lucas.....	443	428	239
Mackinac.....	1,782	1,684	943
Macomb.....	10,702	10,702	5,998

TABLE II.—Continued.

Counties.	Whole number of children.	Number included in ap- portionment.	Amount apportioned.
Manistee	7,258	7,258	\$4,064 43
Manitou	351	351	196 56
Marquette	10,908	10,865	6,084 40
Mason	4,994	4,964	2,779 84
Meosta	6,897	6,891	3,858 96
Menominee	6,632	6,681	3,713 36
Midland	3,510	3,510	1,965 60
Missaukee	1,285	1,285	719 60
Monroe	11,547	11,547	6,466 32
Montcalm	10,598	10,575	5,922 00
Montmorency	366	358	200 43
Manhigon	13,978	13,921	7,795 76
Nowaygo	6,135	6,016	3,358 98
Oakland	11,007	11,001	6,160 56
Oceana	5,024	5,007	2,803 92
Ogemaw	1,397	1,388	866 95
Ontonagon	907	847	474 32
Oscoda	5,107	4,977	2,787 12
Oscoda	451	405	236 80
Otsego	1,257	1,247	698 32
Ottawa	12,883	12,857	1,199 92
Presque Isle	1,646	1,598	892 06
Rosecommon	506	484	271 04
Roginaw	27,706	27,706	15,515 36
St. Clair	17,478	17,478	9,787 63
St. Joseph	7,303	7,303	4,069 63
Sanilac	11,997	11,966	6,702 06
Schoolcraft	798	782	437 92
Shiawassee	9,152	9,152	5,125 12
Tuscola	10,784	10,695	5,899 20
Van Buren	9,245	9,245	5,177 *20
Washtenaw	12,877	12,877	7,211 12
Wayne	79,228	79,182	44,341 92
Wexford	3,241	3,194	1,788 64

* Including \$44.53 deficiency May apportionment, 1889.
Including \$45.14 deficiency, November apportionment, 1889.

TABLE III.

*Eleventh Semi-Annual Apportionment of the Primary School Interest Fund
November 10, 1890; Rate Per Capita, 77 Cents.*

Counties.	Whole number of children.	Number included in ap- portionment.	Amount apportioned
Totals.....	640,192	638,073	\$492,007
Aloona.....	1,492	1,474	\$1,134
Alger.....	278	278	214
Allegan.....	12,533	12,602	a 9,754
Alpena.....	5,174	5,128	3,948
Antrim.....	8,106	3,099	2,386
Arenac.....	1,711	1,711	1,817
Baraga.....	1,148	1,084	834
Barry.....	7,670	7,670	5,906
Bay.....	18,197	18,063	18,885
Benzie.....	1,629	1,629	1,254
Berrien.....	12,619	12,619	9,716
Branch.....	7,683	7,638	5,877
Calhoun.....	12,500	12,455	9,580
Cass.....	6,045	6,045	4,654
Charlevoix.....	3,138	3,126	2,407
Cheboygan.....	3,379	3,599	2,748
Chippewa.....	3,297	3,228	2,498
Clare.....	1,928	1,917	1,476
Clinton.....	8,538	8,538	b 6,612
Crawford.....	742	722	555
Delta.....	4,166	4,062	3,143
Eaton.....	9,670	9,670	7,445
Emmet.....	2,511	2,494	1,920
Genesee.....	11,555	11,555	8,897
Gladwin.....	899	876	674
Gogebie.....	1,972	1,904	1,466
Grand Traverse.....	3,916	3,916	3,015
Gratiot.....	9,380	9,380	7,207
Hillsdale.....	8,667	8,658	6,666
Houghton.....	11,063	10,927	8,413
Huron.....	10,741	10,741	8,270
Ingham.....	10,641	10,641	8,198
Ionia.....	9,823	9,823	c 7,610
Iosco.....	4,293	4,293	3,305
Iron.....	1,086	958	737
Isabella.....	6,255	6,217	4,787
Ile Royal.....			
Jackson.....	12,674	12,674	9,756
Kalamazoo.....	11,511	11,467	8,822
Kalkaska.....	1,542	1,524	1,173
Kent.....	30,506	30,506	23,488
Keweenaw.....	952	952	733
Lake.....	2,059	2,052	1,580
Lapeer.....	10,091	10,091	d 7,846
Leelanau.....	2,883	2,852	e 2,062
Lenawee.....	13,982	13,982	10,766
Livingston.....	6,351	6,319	4,862
Luce.....	443	428	321
Mackinac.....	1,782	1,684	1,290
Macomb.....	10,702	10,702	8,240

TABLE III.—Continued.

Counties.	Whole number of children.	Number included in ap- portionment.	Amount apportioned.
Manistee.....	7,258	7,258	\$5,588 66
Manitou.....	351	351	270 27
Marquette.....	10,908	10,865	8,366 05
Mason.....	4,964	4,964	3,822 28
Mecosta.....	6,897	6,891	5,806 07
Menominee.....	7,432	7,431	f 6,169 87
Midland.....	3,510	3,510	2,702 70
Missaukee.....	1,285	1,285	989 45
Monroe.....	11,547	11,547	8,891 19
Montcalm.....	10,598	10,575	8,142 75
Montmorency.....	396	398	275 66
Muskegon.....	13,978	13,921	10,719 17
Newaygo.....	6,135	6,016	4,632 32
Oakland.....	11,007	11,061	8,470 77
Oceana.....	5,024	5,007	3,855 39
Ogemaw.....	1,397	1,388	1,068 76
Ontonagon.....	907	847	652 19
Osceola.....	5,107	4,977	3,832 29
Oscoda.....	451	405	311 85
Osego.....	1,257	1,247	960 19
Ottawa.....	12,883	12,857	9,899 89
Presque Isle.....	1,646	1,593	1,226 61
Roscommon.....	505	484	372 68
Saginaw.....	27,706	27,006	21,333 62
St. Clair.....	17,478	17,478	13,458 06
St. Joseph.....	7,303	7,303	5,623 31
Sanilac.....	11,997	11,968	9,215 86
Schoolcraft.....	793	782	602 14
Shiawassee.....	9,152	9,152	7,047 04
Tuscola.....	10,784	10,695	8,235 15
Van Buren.....	9,245	9,245	7,118 65
Washtenaw.....	12,877	12,877	9,915 29
Wayne.....	79,228	79,182	60,970 14
Wexford.....	3,241	3,194	2,459 38

- a Includes \$50.96 deficiency, May apportionment, 1890.
 b Includes \$42.00 deficiency, May apportionment, 1890.
 c Includes \$47.04 deficiency, May apportionment, 1890.
 d Includes \$79.52 deficiency, May apportionment, 1890.
 e Includes \$23.52 deficiency, May apportionment, 1890.
 f Includes \$448.00 deficiency, May apportionment, 1890.

TABLE IV.

General School Statistics, as Reported by School Inspectors for the year Ending September 1, 1890.

Counties.	Number of townships and cities reporting.	Whole No. of school districts.	No. of districts that maintained school.	No. of graded school districts.	No. of children between five and twenty years of age.	Number of children that attended public schools.	Average No. of months school.	No. of school houses and material of construction.				Whole No. of sittings provided in school-houses.	Estimated valuation of school property.
								Frame.	Brick.	Stone.	Log.		
Totals	1,241	7,163	7,074	513	654,502	427,032	7.7	5,318	1232	69	412	552,496	\$13,858,627 00
Alcona	8	23	23	1	1,433	1,008	7.9	16	---	---	6	1,176	\$16,805 00
Alger	5	10	10	---	290	212	6.5	6	1	---	8	425	10,000 00
Allegan	24	184	184	17	12,404	9,455	7.	173	20	---	---	12,960	182,734 00
Alpena	8	22	20	1	5,252	2,486	5.	40	1	---	9	3,327	71,700 00
Antrim	15	68	68	4	3,258	2,502	6.9	58	3	---	17	3,448	72,708 00
Arenac	11	29	28	2	1,980	1,277	7.	24	1	---	4	1,784	25,925 00
Baraga	4	11	11	3	1,170	750	7.7	9	---	---	3	686	17,960 00
Barry	17	147	147	5	7,513	5,934	7.6	133	14	---	2	8,333	149,835 00
Bay	16	58	55	4	19,338	9,770	7.8	37	11	---	5	9,758	341,491 00
Benzie	12	45	43	2	1,790	1,405	6.4	44	---	---	3	2,128	81,405 00
Berrien	21	149	149	15	12,659	9,371	7.7	117	43	---	---	12,985	320,170 00
Branch	17	130	130	6	7,540	6,119	8.2	83	39	11	---	8,865	178,630 00
Calhoun	23	162	162	3	12,915	9,161	8.1	135	35	6	---	12,212	496,370 00
Cass	16	115	114	5	6,078	4,890	8.1	91	26	---	---	7,093	141,980 00
Charlevoix	16	69	68	4	3,065	2,321	6.5	56	3	---	8	3,698	65,530 00
Cheboygan	15	50	48	2	3,714	2,295	6.2	37	1	---	13	2,769	86,115 00
Chippewa	10	41	39	1	3,387	2,168	6.	24	2	---	13	2,530	51,730 00
Clare	12	39	36	3	2,034	1,477	6.8	31	1	---	8	2,897	36,117 00
Clinton	16	129	129	8	8,425	5,977	8.	101	30	---	---	8,912	157,635 00
Crawford	9	41	35	1	707	590	4.9	30	---	---	5	1,484	26,280 00
Delta	14	41	38	5	4,527	2,530	6.9	28	2	---	11	2,650	89,163 00
Eaton	18	147	147	10	9,324	7,788	7.9	116	40	---	---	10,254	192,550 00
Emmet	12	60	53	2	2,507	1,663	5.5	46	1	---	13	3,145	43,777 00
Genesee	20	159	159	12	11,676	8,867	8.2	148	20	---	---	12,108	314,180 00
Gladwin	9	26	25	1	980	725	6.4	13	---	---	13	1,202	17,681 00
Gogebic	6	12	11	2	2,843	1,740	8.6	14	---	---	1	1,666	68,400 00
Grand Traverse	13	65	64	4	3,977	2,917	6.9	69	2	---	2	3,325	81,395 00
Grafton	17	129	123	9	9,265	7,470	7.7	119	9	---	---	9,246	140,250 00
Hillsdale	19	166	165	10	8,568	6,936	7.9	106	57	8	---	10,762	285,030 00
Houghton	10	28	28	12	11,188	6,560	7.3	20	1	1	4	4,533	129,650 00
Huron	27	108	108	10	11,005	6,500	7.5	89	7	---	12	7,646	93,940 00
Ingham	17	135	135	10	11,081	8,186	8.4	106	37	1	---	10,289	261,775 00
Ionia	17	144	144	11	9,715	7,404	8.2	119	31	---	1	10,620	200,159 00
Iosco	12	23	23	4	4,395	2,232	7.1	28	---	---	2	2,798	36,399 00
Iron	6	14	11	3	1,288	847	6.5	7	---	---	3	944	19,783 00
Isabella	16	101	100	2	6,313	4,446	6.9	32	5	---	14	5,907	84,055 00
Ile Royal	---	---	---	---	---	---	---	---	---	---	---	---	---
Jackson	20	157	157	10	12,535	9,208	8.6	113	57	---	---	11,810	343,855 00
Kalamazoo	17	138	138	8	11,162	7,897	7.9	110	36	---	---	10,864	375,975 00
Kalkaska	12	58	52	1	1,508	1,286	6.7	51	1	---	1	2,444	34,500 00
Kent	25	216	215	22	31,640	21,711	8.3	188	49	---	3	25,323	996,495 00
Keweenaw	7	9	9	2	974	531	7.8	8	---	---	---	1,080	15,150 00
Lake	12	44	42	4	1,806	1,440	6.3	39	2	---	2	2,237	34,535 00
Lapeer	19	137	137	13	9,757	7,559	8.3	128	12	1	---	10,096	166,575 00
Leelanau	11	54	53	2	2,763	1,781	6.3	40	1	1	9	2,592	28,920 00

GENERAL SCHOOL STATISTICS.

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TABLE IV.—Continued.

Counties.	No. of townships and cities reporting.	Whole No. of school districts.	No. of districts that maintained school.	No. of graded school districts.	No. of children between five and twenty years of age.	Number of children that attended public schools.	Average No. of months school.	No. of school houses and material of construction.				Whole No. of sittings provided in school houses.	Estimated valuation of school property.
								Frame.	Brick.	Stone.	Log.		
Lenawee	24	199	199	15	18,943	10,196	8.4	101	102	9	---	14,256	\$883,855 00
Livingston	16	125	125	4	6,155	5,266	8.3	120	13	3	---	7,437	128,200 00
Lece	3	9	7	1	440	352	4.9	4	---	---	3	418	7,940 00
Machine	11	83	32	2	1,872	1,470	5.7	14	1	---	14	1,862	30,294 00
Macomb	15	112	112	10	10,716	6,266	8.3	100	18	---	---	8,711	202,244 00
Manistee	13	53	51	5	7,631	4,317	7.	49	3	---	5	4,946	148,013 00
Manitou	3	4	4	---	318	221	7.	2	---	---	2	475	1,400 00
Marquette	15	83	83	8	10,822	6,618	8.2	31	4	3	---	6,322	271,082 00
Mason	15	54	54	4	3,092	4,113	7.3	51	5	---	5	4,870	116,861 00
Mecona	17	101	98	6	6,524	5,023	7.2	90	4	---	6	6,861	126,800 00
Menominee	13	46	46	7	8,247	5,182	8.7	39	4	---	10	4,734	110,776 00
Midland	15	61	61	3	3,540	2,604	7.2	46	5	---	14	3,753	71,717 00
Milanee	12	45	43	2	1,896	1,072	6.7	38	---	---	6	1,919	43,865 00
Monroe	16	137	137	6	11,264	7,071	8.1	71	67	2	---	9,861	174,196 00
Montcalm	22	186	185	11	10,465	7,873	8.2	180	6	---	8	10,601	174,445 00
Montmorency	6	19	19	1	430	322	6.3	7	---	---	15	714	11,225 00
Maskagon	17	91	89	7	13,864	9,446	7.2	82	13	---	7	10,393	360,560 00
Navarro	22	109	106	4	6,182	4,680	7.2	91	6	---	11	6,502	92,885 00
Oakland	26	214	213	15	10,924	8,813	8.	171	36	14	---	14,547	286,970 00
Oceana	16	88	88	4	5,181	4,088	7.2	79	5	---	5	5,288	78,331 00
Ogemaw	16	43	41	1	1,424	1,124	6.	36	---	---	6	1,930	26,101 00
Ontonagon	7	22	15	3	912	625	5.1	10	---	---	4	1,123	12,850 00
Oscoda	16	92	90	6	5,070	3,870	7.	82	1	---	7	5,815	71,215 00
Oscoda	9	29	26	---	439	348	4.2	17	---	---	9	814	8,725 00
Otago	9	41	41	3	1,287	951	7.	38	1	---	3	1,999	31,247 00
Ottawa	17	121	121	15	12,549	9,041	8.3	106	21	1	---	11,245	193,230 00
Presque Isle	10	32	31	1	1,647	896	4.5	18	---	---	23	1,818	18,170 00
Roscommon	8	19	17	2	462	338	5.1	9	---	---	9	712	6,985 00
Saginaw	30	153	149	14	27,733	15,536	7.9	123	29	---	7	17,468	575,982 00
St. Clair	27	155	155	8	18,123	11,062	8.	141	22	---	3	14,097	275,765 00
St. Joseph	16	124	124	8	7,223	6,013	8.3	92	32	2	---	8,458	237,465 00
Sanilac	26	139	137	11	12,272	8,650	7.9	126	7	---	7	9,986	109,890 00
Schoolcraft	5	19	17	1	887	583	5.7	13	---	---	6	1,066	14,034 00
Shiawassee	18	126	126	10	9,107	7,263	8.8	109	21	---	1	9,544	192,691 00
Tuscola	23	144	143	12	10,792	7,903	7.9	126	17	---	3	9,862	159,945 00
Van Buren	18	153	153	15	9,069	7,571	7.9	134	22	---	---	11,269	216,025 00
Washtenaw	22	167	167	8	12,791	8,916	8.4	107	64	7	---	11,619	450,990 00
Wayne	20	152	152	17	89,228	51,250	8.6	109	100	---	---	85,452	1,681,115 00
Westford	16	70	67	2	3,314	2,692	6.6	58	2	---	12	8,786	80,965 00

TABLE V.

Employment of Teachers as Reported by School Inspectors, for the year ending September 1, 1890.

Counties.	No. of teachers required.		Whole No. of teachers employed.		Aggregate No. of months taught by—		Total wages of teachers.			Average monthly wages.	
	Graded schools.	Un-graded schools.	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Men.	Women.
Totals.....	4,277	6,654	3,561	12,429	20,004	72,987	\$935,373 62	\$2,390,413 42	\$3,325,287 04	\$40 73.45	\$27 43.08
Alcona.....	4	22	13	18	104	101	\$4,471 80	\$8,808 00	\$7,774 80	\$43 00	\$32 70
Alger.....	12	3	10	20	58	58	1,030 00	2,690 75	3,720 75	51 50	46 39
Allegan.....	61	172	92	307	467	1,449	18,777 71	88,241 58	57,019 26	47 82	26 39
Alpena.....	30	42	5	77	36	518	4,010 00	17,487 25	21,497 25	111 88	83 79
Antrim.....	20	65	37	96	170	456	7,080 28	14,043 88	21,064 08	41 29	30 79
Arenac.....	2	29	10	38	65	162	2,654 25	5,063 77	7,718 02	40 38	81 25
Baraga.....	9	8	4	18	39	95	3,320 00	4,087 50	7,367 50	85 72	42 50
Barry.....	80	143	97	227	434	953	15,010 62	23,858 59	38,399 21	34 58	24 54
Bay.....	150	55	27	134	243	1,701	15,514 75	64,090 95	79,575 70	68 84	37 66
Benzie.....	12	41	12	69	60	338	2,715 50	9,744 55	12,460 05	45 26	29 26
Berrien.....	99	138	81	259	451	1,491	21,232 75	46,160 05	67,393 80	47 08	80 95
Branch.....	49	124	80	249	373	1,135	15,808 78	28,944 38	44,547 14	43 70	25 43
Calhoun.....	110	156	84	325	439	1,800	19,106 50	53,649 68	72,766 18	43 52	28 84
Case.....	34	110	78	171	354	829	15,250 37	23,622 30	38,872 67	39 71	28 49
Charlevoix.....	16	66	27	92	180	444	5,100 79	12,339 18	17,339 97	39 23	27 56
Cheboygan.....	20	46	22	58	154	341	7,152 87	11,263 75	18,416 62	46 40	39 03
Chippewa.....	10	38	21	89	121	274	5,244 00	9,309 86	14,553 86	43 58	34 23
Clare.....	13	34	13	61	76	230	3,414 25	8,597 25	12,011 50	44 92	87 04
Clinton.....	41	122	73	199	341	1,022	13,114 45	28,207 94	41,322 39	38 45	27 80
Crawford.....	5	35	12	44	46	193	2,030 00	6,168 00	8,198 00	44 13	81 95
Delta.....	25	83	13	57	94	299	5,877 00	15,053 25	20,930 25	62 40	38 69
Easton.....	68	128	86	275	413	1,278	17,164 52	36,313 46	53,477 98	41 56	28 41
Emmet.....	17	56	16	79	79	262	3,748 50	11,342 81	15,090 81	43 11	28 93
Genesee.....	81	148	88	255	432	1,540	15,838 28	44,005 25	62,894 51	40 88	28 57
Gladwin.....	3	24	6	32	22	164	1,067 20	5,138 90	6,176 10	47 14	31 58
Gogebio.....	13	9	4	24	39	226	4,095 00	11,818 57	15,413 57	105 00	50 08
Gd. Trav'se.....	27	60	19	109	100	543	5,080 00	18,986 60	24,066 60	50 80	34 96
Gratiot.....	47	121	73	220	379	979	14,328 83	26,652 82	40,982 65	37 98	27 22
Hilledale.....	50	180	115	257	504	1,196	19,816 90	27,232 82	47,049 72	39 31	22 77
Houghton.....	119	18	21	114	192	1,077	18,550 00	47,306 75	65,856 75	96 61	43 92
Huron.....	80	96	42	93	359	759	14,768 50	21,975 10	36,743 60	41 13	28 95
Ingham.....	88	125	83	292	410	1,474	18,586 66	41,639 50	60,226 16	43 53	21 45
Ionia.....	70	133	73	242	396	1,856	17,153 75	39,274 25	56,428 01	43 81	28 96
Iosco.....	34	19	5	61	48	424	3,512 50	14,745 50	18,568 00	79 42	84 77
Iron.....	9	11	2	17	20	140	1,450 00	6,866 50	8,253 50	72 50	43 67
Isabella.....	15	100	49	143	228	633	8,251 60	18,777 82	27,028 92	86 19	29 66
Isle Royal.....	108	147	93	343	463	1,239	21,198 74	65,276 10	76,469 84	48 77	30 89
Jackson.....	97	129	68	294	336	1,628	15,432 59	51,197 42	66,631 01	47 34	31 44
Kalamazoo.....	7	51	24	69	116	294	4,679 23	8,964 00	13,643 23	40 38	30 43
Kalkaska.....	299	195	105	585	608	3,985	32,536 46	159,449 57	191,986 03	58 51	42 87
Kent.....	6	7	4	9	38	68	2,640 00	2,896 25	5,536 25	69 73	42 59
Keweenaw.....	13	89	20	45	112	253	4,663 50	7,663 32	12,326 82	41 69	80 01
Lake.....	56	125	68	180	441	1,137	18,408 59	30,062 58	48,491 47	41 74	26 45
Lapeer.....	15	51	13	67	82	290	2,975 65	8,868 80	11,374 45	86 28	26 06
Leelanau.....	106	181	108	372	550	1,953	24,325 90	53,032 59	77,358 49	45 13	39 08
Lenawee.....	31	132	87	215	399	1,008	13,638 00	21,679 40	35,317 40	34 18	21 55
Livingston.....	3	7	2	11	20	44	1,480 00	1,637 00	3,117 00	74 00	37 20
Luce.....											

EMPLOYMENT OF TEACHERS.

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TABLE V.—Continued.

Counties.	No. of teachers required.		Whole No. of teachers employed.		Aggregate No. of months taught by—		Total wages of teachers.			Average monthly wages.	
	Graded schools.	Un-graded schools.	Men.	Women.	Men.	Women.	Men.	Women.	Total.	Men.	Women.
Mackinac	14	82	12	44	76	239	\$3,678 25	\$7,774 88	\$11,453 13	\$48 39	\$32 53
Macomb	49	103	47	133	325	999	14,792 42	27,084 75	42,457 17	45 51	27 69
Manistee	64	47	31	108	186	751	9,998 90	27,897 91	37,796 81	53 22	37 14
Manitou		4		7		28		763 00	763 00		27 25
Marquette	95	96	20	108	178	966	16,027 50	46,448 50	62,476 00	90 04	49 08
Mason	43	51	24	94	153	641	7,292 87	23,787 62	31,080 49	47 66	37 11
Meosta	37	93	30	147	196	842	8,894 38	27,773 55	36,167 88	47 98	32 93
Menominee	66	39	14	100	123	847	9,130 00	35,887 84	44,967 84	74 14	42 84
Midland	16	59	18	92	102	475	4,510 00	14,440 13	18,950 13	44 22	30 40
Missaukee	5	42	23	51	117	217	4,736 04	7,005 20	11,741 24	40 47	32 23
Monroe	42	132	72	197	365	1,008	13,944 77	25,913 30	39,858 07	35 20	25 70
Montcalm	61	125	54	277	279	1,347	12,046 65	38,044 47	50,091 12	43 10	28 24
Mtn'rncy	4	18	9	24	42	104	1,405 67	3,126 50	4,532 17	33 46	30 06
Manitowish	122	82	40	224	267	1,623	17,857 25	62,234 41	79,591 66	65 00	38 34
Newaygo	20	102	37	167	206	745	8,568 00	21,239 79	29,807 79	41 59	28 50
Oakland	79	199	97	315	543	1,808	24,985 58	44,720 94	69,706 49	45 59	24 76
Oceana	13	85	46	124	222	556	7,842 46	16,086 70	23,879 16	36 82	28 54
Ogemaw	4	42	15	44	77	220	2,832 75	6,981 00	9,863 75	87 43	31 73
Ontonagon	14	15	9	19	82	139	5,725 00	5,559 00	11,284 00	69 81	39 99
Oscoda	27	65	31	126	172	676	7,532 50	19,892 61	27,425 11	41 44	29 42
Oscoda		26	12	28	41	53	1,202 00	2,133 18	3,340 18	29 31	25 76
Otsego	7	38	17	50	93	229	3,465 50	6,835 30	10,300 80	37 26	29 54
Ottawa	80	107	57	194	390	1,253	17,457 37	36,714 90	54,172 27	44 65	29 80
Presque Isle	4	31	25	14	110	60	3,617 00	1,871 00	5,498 00	32 88	31 18
Roscommon	5	16	3	26	17	108	717 00	3,498 50	4,215 50	42 17	32 88
Saginaw	206	140	83	331	632	2,551	35,906 00	92,955 98	128,961 98	56 81	36 40
St. Clair	88	150	52	243	321	1,711	15,904 73	50,841 26	66,245 99	49 54	29 42
St. Joseph	61	118	63	236	332	1,212	15,088 75	32,721 77	47,810 52	45 44	26 99
Sanilac	28	127	81	109	606	783	21,581 85	18,783 15	40,365 00	35 61	23 96
Schoolcraft	7	16	13	20	43	125	2,094 00	5,904 25	7,998 25	43 69	47 23
Shiawassee	62	116	75	212	408	1,145	17,170 41	32,466 33	49,636 74	42 06	28 35
Tuscola	49	131	65	183	411	1,063	15,464 27	28,490 95	43,945 22	37 62	26 20
Van Buren	60	139	89	245	445	1,238	17,782 70	35,097 68	52,880 38	39 98	23 35
Washtenaw	110	160	93	306	564	1,842	29,670 30	54,788 85	84,459 15	52 60	29 71
Wayne	55	125	95	667	703	5,999	55,244 07	305,319 58	361,063 60	78 58	50 98
Wexford	25	69	24	107	115	621	5,901 25	21,769 25	27,670 50	51 31	35 05

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TABLE VI.

Resources of School Districts as Reported by School Inspectors for the Year ending September 1, 1890.

Counties.	Moneys on hand, Sept. 2, 1889.	One mill tax.	Primary school interest fund.	Library moneys.	District taxes for all purposes.	Raised from all other sources.	Total resources for the year.
Totals	\$1,095,840 85	\$658,305 11	\$795,813 47	\$34,999 76	\$3,451,729 93	\$668,621 01	\$6,763,125 20
Alcona.....	\$8,182 00	\$755 84	\$1,704 93	\$41 48	\$6,798 72	\$226 18	\$12,658 65
Alger.....	444 61	562 91	40 00	220 00	5,966 13	180 25	7,668 90
Allegan.....	16,851 57	13,287 22	16,234 88	523 25	45,256 60	5,121 02	97,278 54
Alpena.....	9,567 19	966 91	6,532 88	39 06	57,538 13	867 93	55,577 05
Antrim.....	9,309 44	2,446 59	4,650 31	-----	26,890 65	5,130 14	47,917 46
Arenac.....	1,917 56	378 60	2,117 36	150 04	8,347 08	569 89	13,480 53
Baraga.....	2,651 19	585 63	1,068 04	-----	7,226 48	2,084 69	13,657 96
Barry.....	14,036 06	11,224 54	9,560 90	524 55	29,516 22	3,503 89	68,665 66
Bay.....	23,732 41	4,145 30	21,356 37	236 15	105,062 50	2,926 96	160,960 21
Benzie.....	2,371 87	1,146 43	2,042 18	8 84	14,783 61	2,251 21	22,578 14
Berrien.....	19,234 72	11,957 91	15,727 90	308 54	66,151 89	19,561 62	132,942 58
Branch.....	19,726 38	12,989 75	9,742 34	158 01	86,730 57	8,006 25	137,965 25
Calhoun.....	14,152 90	17,370 71	15,790 95	558 97	79,791 14	17,202 00	145,371 06
Cass.....	11,215 57	12,666 40	7,553 40	265 21	27,986 94	7,512 51	67,160 38
Charlevoix.....	5,820 08	2,193 29	3,966 13	29 56	23,808 36	9,270 39	44,967 81
Cheboygan.....	6,829 96	2,556 63	4,299 73	184 17	20,082 61	8,769 17	42,661 67
Chippewa.....	4,135 04	2,286 65	4,071 26	580 38	10,832 94	6,715 30	26,071 52
Clare.....	6,207 14	1,787 59	2,066 34	-----	16,708 01	1,681 81	23,453 89
Clinton.....	14,023 24	14,954 43	10,756 66	514 96	90,320 91	4,156 48	74,756 65
Crawford.....	7,842 90	2,326 13	1,251 74	6 40	9,295 96	420 61	21,778 74
Delta.....	5,681 51	3,172 15	6,749 89	360 34	22,361 99	15,307 31	54,103 19
Eaton.....	16,838 10	14,447 46	12,626 68	175 31	46,442 41	6,278 20	96,558 16
Emmet.....	8,785 93	758 70	2,553 70	-----	15,279 62	14,747 74	37,130 69
Genesee.....	12,401 83	19,367 36	14,536 76	1,779 29	59,695 76	5,708 14	113,638 14
Gladwin.....	1,952 68	550 79	864 79	-----	8,744 32	1,552 89	18,664 97
Gogebic.....	3,927 24	2,502 41	985 60	-----	28,755 94	3,044 19	39,215 38
Grand Traverse.....	5,990 53	3,199 52	4,625 46	-----	31,096 21	1,002 84	46,521 81
Gratiot.....	13,765 00	6,600 19	11,225 65	519 62	38,963 83	8,280 61	79,296 90
Hillsdale.....	10,551 10	17,908 59	10,834 57	200 62	34,443 26	13,968 37	87,906 51
Houghton.....	48,388 40	30,753 81	13,920 98	305 82	48,521 91	16,301 16	158,281 53
Huron.....	11,619 74	4,764 98	18,502 15	343 16	29,097 83	1,442 12	60,769 96
Ingham.....	15,530 88	17,811 82	13,907 71	1,183 45	61,695 82	7,477 36	117,546 04
Ionia.....	16,309 13	14,527 02	12,091 25	393 49	44,194 83	8,378 64	95,894 36
Iosco.....	8,596 47	575 58	4,634 26	152 16	21,322 96	4,036 54	34,619 44
Iron.....	8,145 85	1,836 75	1,022 47	323 88	7,204 51	2,208 77	20,737 23
Isabella.....	5,345 76	3,739 14	7,520 92	10 85	28,639 91	12,005 65	54,562 23
Jackson.....	15,945 80	22,350 07	15,822 12	546 07	59,748 13	6,826 12	121,238 81
Kalamazoo.....	24,240 22	20,921 74	14,181 80	1,698 18	60,878 76	6,886 66	128,255 36
Kalkaska.....	4,233 68	2,712 23	1,956 64	49 67	15,836 19	1,526 09	26,314 50
Kent.....	89,511 91	28,204 38	38,116 18	4,487 89	227,632 01	51,349 42	439,601 79
Keweenaw.....	5,365 16	2,194 61	1,215 10	118 72	4,177 77	77 87	13,174 23
Lake.....	5,049 52	1,004 68	1,911 41	-----	15,581 20	560 88	24,107 69
Lapeer.....	13,752 87	11,095 24	12,523 81	312 06	41,195 83	10,142 88	89,021 19
Leelanau.....	3,283 14	916 84	3,247 24	-----	9,594 49	876 03	17,902 74
Lenawee.....	23,197 05	27,259 37	17,384 98	214 15	54,766 50	10,749 01	138,571 01
Livingston.....	10,750 66	12,567 27	8,838 77	84 54	24,646 31	4,538 16	60,925 71
Luce.....	1,176 56	786 20	561 92	848 58	4,042 08	816 19	7,731 48
Mackinac.....	1,658 30	578 61	2,204 54	105 78	18,585 51	4,974 68	23,107 42
Macomb.....	15,545 11	20,517 97	13,031 57	853 81	24,071 09	3,018 11	76,832 66
Manistee.....	8,844 73	2,362 02	9,298 40	434 69	44,320 56	21,542 68	86,798 08

RESOURCES OF SCHOOL DISTRICTS.

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TABLE VI.—Continued.

Counties.	Moners on hand Sept. 2, 1889.	One mill tax.	Primary school interest fund.	Library moneys.	District taxes for all purposes.	Raised from all other sources.	Total resources for the year.
Manitou.....	\$24 08	\$36 42	\$510 12	-----	\$267 84	\$150 00	\$968 46
Marquette.....	34,420 19	16,323 04	12,655 52	\$167 09	105,291 52	52,596 79	221,453 15
Mason.....	3,762 99	1,195 68	6,029 45	266 20	44,860 92	1,396 78	57,521 97
Mcosta.....	19,339 06	3,722 44	8,408 47	129 36	30,496 56	2,203 08	64,293 97
Menominee.....	20,672 63	5,667 70	6,798 09	457 93	60,198 31	6,425 77	100,220 43
Midland.....	9,487 24	1,310 52	4,117 89	17 50	21,277 68	3,465 95	39,676 78
Missaukee.....	6,597 80	1,978 64	1,279 12	-----	12,687 26	6,275 15	25,817 97
Monroe.....	13,246 77	15,292 17	14,661 31	304 21	18,891 55	3,599 79	65,295 80
Montcalm.....	24,150 97	6,576 89	12,166 66	70 85	46,671 77	8,619 00	98,256 14
Montmorency....	1,656 20	433 84	596 95	68 74	6,953 26	898 08	10,590 10
Muskegon.....	14,284 34	8,653 76	16,787 29	404 18	91,768 18	80,750 72	212,638 47
Newaygo.....	12,560 18	2,699 69	6,943 60	9 48	83,574 05	3,708 66	59,485 66
Oakland.....	12,769 22	22,680 66	13,980 53	376 40	51,962 11	19,825 07	121,043 99
Oceana.....	8,524 61	2,755 01	6,129 80	6 17	25,683 75	3,173 21	46,373 55
Ogemaw.....	4,492 08	779 52	1,559 55	162 66	10,950 94	260 16	18,304 91
Ontonagon.....	3,824 29	1,014 05	591 92	65 44	8,857 16	4,256 10	18,598 96
Oscoda.....	9,064 43	3,595 46	5,909 65	70 20	28,291 32	11,100 15	57,931 21
Oscoda.....	1,531 19	294 57	577 03	59 21	4,393 60	241 07	7,036 67
Otsego.....	3,440 80	1,386 71	1,699 58	22 28	11,520 81	8,546 42	26,615 60
Ottawa.....	14,587 42	11,601 98	16,221 44	90 64	44,218 78	9,002 79	95,723 00
Presque Isle.....	1,238 89	645 40	1,342 88	-----	6,769 72	212 88	10,704 77
Rosecommon.....	1,619 61	343 54	516 69	1 47	4,632 92	348 82	7,463 85
Saginaw.....	56,855 50	14,683 27	35,459 45	381 18	158,177 66	32,502 17	298,060 23
St. Clair.....	39,722 30	13,564 80	22,234 39	388 43	58,672 84	8,899 33	143,467 09
St. Joseph.....	8,692 26	14,600 41	9,460 67	72 51	38,708 87	17,170 17	88,704 89
Sanilac.....	12,378 16	5,068 78	15,043 18	224 90	31,850 34	4,231 30	68,816 61
Schoolcraft.....	5,097 81	1,232 78	619 48	-----	6,388 22	656 14	13,994 38
Shiawassee.....	16,000 44	9,777 15	11,583 24	250 99	51,004 75	5,178 58	93,795 15
Tuscola.....	14,468 98	8,019 06	13,357 54	46 99	44,038 33	4,348 09	84,264 01
Van Buren.....	13,467 97	12,521 83	11,283 75	886 01	44,774 07	5,382 55	87,816 18
Washtenaw.....	14,647 32	28,819 54	16,702 22	875 66	56,891 42	24,001 52	141,937 68
Wayne.....	73,384 74	25,146 98	103,812 88	9,865 09	521,538 42	32,653 46	766,409 57
Wexford.....	12,361 54	2,431 79	4,333 80	349 82	36,180 13	13,295 05	68,952 13

TABLE VII.

Expenditures of School Districts as reported by School Inspectors for the year ending September 1, 1890.

Counties.	Paid Teachers.	Paid for building and repairs.	Paid for library books and care of library.	Paid on bonded indebtedness.	Paid for all other purposes.	Total expenditures for the year, less amount on hand.	Amount on hand Sept. 1, 1890.
Totals.....	\$5,323,831 75	\$894,530 35	\$70,171 18	\$349,442 84	\$1,060,782 77	\$5,698,808 84	\$1,064,316 86
Alcona.....	\$7,477 62	\$526 39		\$559 03	\$2,034 16	\$10,597 20	\$2,061 45
Alger.....	3,720 75	1,698 27		76 70	1,306 10	6,801 82	862 08
Allegan.....	57,120 98	5,123 57	\$899 47	3,873 41	12,315 69	78,833 12	18,445 42
Alpena.....	21,387 25	7,947 13	463 85	108 00	16,707 88	46,618 61	8,958 44
Antrim.....	21,002 75	8,048 55	46 94	3,370 30	6,890 68	38,859 17	9,058 29
Arenac.....	7,313 13	340 35		1,884 37	2,266 83	11,604 68	1,875 85
Baraga.....	7,357 50	732 96	109 10	989 00	2,296 50	10,885 15	2,822 83
Barry.....	38,502 51	5,359 36	123 10	2,500 60	7,857 14	54,351 71	14,313 95
Bay.....	79,393 20	30,164 47	170 27	3,331 70	27,259 78	140,819 42	30,640 79
Benzie.....	12,468 68	2,763 04		790 42	3,268 94	19,291 08	3,287 06
Berrien.....	67,468 50	19,064 41	210 00	8,965 30	18,027 01	113,785 22	19,207 36
Branch.....	44,513 34	3,600 98	30 12	3,144 68	12,285 90	63,575 02	24,390 23
Calhoun.....	72,784 92	18,214 27	299 13	10,697 20	22,265 04	124,260 56	21,110 52
Cass.....	38,923 17	4,145 65	51 15	1,721 88	10,301 43	55,143 28	12,017 05
Charlevoix.....	17,806 17	9,970 74	8 00	3,512 97	7,050 24	37,843 12	7,144 69
Cheboygan.....	17,833 00	6,824 49	615 83	6,088 75	5,904 60	37,216 67	5,445 00
Chippewa.....	18,863 17	4,079 75	721 87	824 61	6,894 12	25,868 52	2,188 00
Clare.....	12,090 63	2,202 59		2,578 50	4,769 57	21,641 59	6,814 80
Clinton.....	41,311 04	5,147 25	70 60	3,723 18	9,949 20	60,201 27	14,555 38
Crawford.....	8,083 00	2,251 34		1,705 22	4,891 74	16,931 30	4,242 44
Delta.....	20,980 25	15,707 88	1 20	1,780 84	9,870 64	47,740 81	6,862 38
Eaton.....	58,470 48	10,578 68	124 63	7,255 65	13,789 68	85,219 12	11,339 04
Emmet.....	14,777 16	7,195 12		1,156 51	7,712 00	30,840 79	6,289 90
Genesee.....	62,753 51	3,998 14	1,120 97	15,299 19	18,120 37	101,292 18	12,890 96
Gladwin.....	5,959 35	355 60	7 25	2,146 81	3,055 39	11,524 40	2,140 57
Gogebio.....	15,363 57	740 00	740 08	6,076 00	9,833 21	32,752 81	6,462 57
G'd Traverse.....	24,067 38	5,378 89	305 50	4,051 75	7,472 56	41,276 08	5,245 73
Gratiot.....	41,178 40	2,267 99	351 25	9,416 85	12,342 23	65,576 72	13,720 18
Hilledale.....	47,325 35	11,749 20	190 88	3,323 89	15,773 55	78,362 37	9,544 14
Houghton.....	65,856 75	5,404 17	607 90	7,385 00	81,744 34	110,998 16	47,283 37
Huron.....	36,655 90	1,918 15	46 82	2,222 94	8,336 62	49,178 68	11,591 35
Ingham.....	60,239 46	3,060 86	1,169 86	4,545 99	23,484 00	92,500 17	25,045 67
Ionia.....	56,431 55	4,926 60	289 30	5,579 93	14,705 18	81,682 51	14,211 85
Ioco.....	18,271 20	4,998 05	65 20	690 00	8,591 02	32,610 47	2,008 97
Iron.....	8,253 50	1,694 75	160 28	2,345 50	3,747 04	16,206 02	4,531 21
Isabella.....	26,890 85	11,797 22	13 75	2,254 01	6,896 44	47,852 27	6,709 96
Isle Royal.....							
Jackson.....	76,522 09	5,284 94	160 92	3,573 97	20,537 80	106,079 72	15,158 59
Kalamazoo.....	66,998 72	8,250 32	908 95	5,793 12	19,360 41	101,311 52	26,943 84
Kalkaska.....	13,618 28	1,147 53	81 66	1,808 48	4,630 68	21,281 58	5,032 92
Kent.....	191,947 68	55,088 83	7,789 38	22,782 58	65,888 81	343,446 78	96,155 01
Keweenaw.....	5,586 35	52 00			1,623 22	7,211 47	5,962 76
Lake.....	12,287 59	1,108 09			1,671 77	19,063 53	5,054 16
Lapeer.....	48,423 88	10,211 95	58 37	4,992 44	10,508 02	74,194 66	14,826 53
Leelanau.....	11,356 91	1,322 58	25 53	648 45	1,838 27	15,166 74	2,716 00
Lenawee.....	77,806 49	18,368 88	1,228 74	8,847 80	17,635 09	118,883 50	19,687 51
Livingston.....	35,346 40	5,028 94	151 84	2,457 82	8,008 96	50,988 96	9,941 75
Luce.....	3,267 00	408 26	95 00	210 00	806 45	4,788 71	2,942 77
Mackinac.....	11,460 75	2,239 34	8 85	3,518 50	4,487 44	21,697 88	1,409 54
Macomb.....	42,527 17	4,381 07	277 24	2,248 68	14,659 19	64,038 35	12,794 31

EXPENDITURES OF SCHOOL DISTRICTS.

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TABLE VII.—Continued.

Counties.	Paid Teachers.	Paid for building and repairs.	Paid for library books and care of library.	Paid on bonded indebtedness.	Paid for all other purposes.	Total expenditures for the year, less amount on hand.	Amount on hand Sept. 1, 1890.
Manistee	\$37,718 88	\$4,070 85	\$521 65	\$5,967 94	\$31,143 78	\$79,412 65	\$7,880 43
Manitou	664 00	33 00			257 90	953 90	24 56
Marquette	62,516 00	49,263 56	574 77	49,704 25	38,011 40	200,069 98	21,333 17
Mason	31,015 99	2,003 71	233 70	11,372 84	9,372 23	54,499 97	3,022 00
Mecosta	36,316 88	8,325 48	157 72	2,387 84	7,518 06	49,606 98	14,687 99
Menominee	44,794 10	7,846 08	938 89	6,260 10	22,786 37	82,625 54	17,594 89
Midland	19,155 05	2,359 26	112 35	3,296 98	6,634 11	31,567 65	8,109 13
Missaukee	11,526 63	5,563 50	230 24	960 99	3,824 88	22,434 24	6,363 73
Monroe	36,307 97	3,134 70	233 94	3,660 90	7,541 91	54,379 42	10,916 38
Montcalm	50,258 92	15,796 59	75 84	1,186 47	12,729 29	79,966 61	18,259 53
Montmorency	5,002 69	700 19		430 55	1,858 92	7,992 35	2,597 75
Muskegon	79,600 66	82,659 41	9,367 82	3,164 92	22,932 44	202,925 25	9,713 22
Newaygo	29,779 79	6,634 31	114 29	2,188 28	8,439 83	47,201 06	12,254 61
Oakland	66,561 80	13,398 02	62 80	7,172 58	16,243 47	106,433 92	14,610 07
Oceana	24,772 07	7,862 57		1,167 70	4,178 63	37,980 77	8,291 78
Ogemaw	9,795 15	1,299 76	40 00	267 87	3,202 97	14,605 75	3,599 16
Ontonagon	11,185 00	2,150 52		212 00	3,162 22	16,662 74	1,986 22
Oscoda	27,890 36	8,856 20	60 86	2,556 45	9,007 91	47,571 79	10,059 42
Oseola	3,258 85	781 88		61 95	1,221 45	5,323 63	1,713 04
Otsego	10,185 80	5,782 85	44 75	667 68	8,133 70	19,764 23	6,551 87
Ottawa	54,168 67	6,154 51	734 95	3,033 12	17,897 28	81,486 43	14,236 57
Prairie Lake	5,247 31	401 41	16 53	172 61	3,312 88	9,150 75	1,554 02
Rosecommon	4,013 50	73 75		266 99	1,352 40	5,706 64	1,756 71
Shiawassee	128,994 98	68,509 22	2,182 41	3,674 78	47,610 17	250,971 54	47,068 69
St. Clair	66,228 99	20,541 26	231 27	4,416 47	27,097 97	118,560 96	24,906 13
St. Joseph	47,900 67	8,089 04	126 52	4,533 76	16,745 16	77,845 15	11,359 74
Sanilac	40,239 00	4,513 02	87 76	4,066 97	10,822 74	56,290 49	9,586 12
Schoolcraft	7,996 25	518 82		30 00	2,366 40	11,248 06	2,751 35
Shiawassee	49,701 49	8,606 25	100 84	6,426 24	16,998 92	76,832 74	16,962 41
Tuscola	43,762 51	5,238 14	37 56	4,973 91	14,314 42	68,361 54	15,832 47
Van Buren	52,973 11	6,297 04	150 00	2,089 06	12,699 71	74,206 92	13,607 26
Washtenaw	84,306 51	11,741 43	844 98	5,378 57	24,072 49	122,336 96	15,068 70
Wayne	361,100 44	180,115 70	33,621 53	9,348 48	67,840 51	672,026 66	94,382 91
Wexford	27,596 50	11,664 17	32 48	4,024 70	12,965 32	56,172 17	12,779 96

TABLE VIII.

Miscellaneous Financial Statistics as reported by School Inspectors for the Year ending September 1, 1890.

Counties.	Bonded indebtedness of the districts.	Total indebtedness of the districts.	Amount due the districts.	Amount received by the districts for non-resident tuition.	Amount paid and due inspectors and members of school boards for services.	Amount paid and due township chairmen and officers for services.
Totals	\$1,661,247 08	\$1,865,497 18	\$185,937 99	\$57,815 57	\$14,247 65	\$16,249 15
Alcona.....	\$1,528 50	\$2,766 97	\$1,163 23	\$1 50	\$127 88	\$58 83
Alger.....	1,000 00	1,915 38			75 00	75 00
Allegan.....	7,037 42	8,233 56	1,905 96	1,726 69	242 10	126 37
Alpena.....	2,000 00	3,404 00	2,902 22	81 20	293 00	230 00
Antrim.....	25,916 48	28,908 07	1,942 59	47 75	170 11	83 56
Arenac.....	5,610 00	6,807 49	2,376 47	26 80	58 88	55 86
Baraga.....		71 41	350 68		40 00	26 00
Barry.....	15,888 88	14,741 47	1,112 24	1,199 19	151 94	128 94
Bay.....	31,817 20	68,268 69	2,671 84	344 96	284 67	320 10
Benzie.....	3,088 00	3,941 0	1,568 91	14 06	123 75	52 20
Berrien.....	31,195 60	32,451 81	8,642 03	1,185 00	218 94	74 81
Branch.....	700 00	8,367 17	1,030 82	1,146 74	308 26	271 75
Calhoun.....	38,775 00	36,237 79	480 99	1,581 61	168 96	474 52
Cass.....	1,196 00	4,219 13	1,561 02	849 84	167 38	120 17
Charlevoix.....	31,488 50	38,027 07	1,986 60	145 31	215 55	82 80
Cheboygan.....	7,470 00	9,568 51	8,148 55	16 25	182 80	179 99
Chippewa.....	11,538 91	16,249 11	5,142 38	22 21	98 75	175 49
Clare.....	2,687 00	4,584 78	4,905 58	18 50	108 39	60 50
Clinton.....	20,918 00	21,885 78	838 82	984 41	161 81	89 93
Crawford.....	3,479 00	4,817 35	912 65	5 00	167 00	79 90
Delta.....	89,575 00	44,356 78	3,333 75	16 25	74 00	191 00
Eaton.....	17,246 90	17,943 34	1,558 50	1,865 33	291 86	68 41
Emmet.....	21,905 32	23,719 52	3,854 10	52 72	142 76	62 11
Genesee.....	58,601 75	63,218 04	944 19	1,969 84	163 33	474 12
Gladwin.....	2,850 00	4,498 26	2,277 22	26 00	108 00	35 56
Gogebic.....	23,900 00	24,207 00			120 00	95 00
Grand Traverse.....	16,920 77	17,338 33	1,758 40	607 25	147 80	65 63
Graiot.....	48,500 00	49,551 15	2,508 26	583 91	156 00	109 98
Hillsdale.....	17,280 00	19,417 90	759 24	1,375 14	152 50	181 66
Houghton.....	13,800 00	19,649 41	747 27	559 25	178 00	102 00
Huron.....	12,814 00	18,171 68	962 10	135 20	306 13	209 65
Ingham.....	58,239 00	53,562 68	2,297 15	1,485 86	133 04	74 46
Ionis.....	8,640 00	18,180 00	634 33	2,239 19	97 75	75 00
Iosco.....	5,400 00	8,578 88	2,111 06	8 50	67 53	276 10
Iron.....	10,279 64	11,021 83	5,927 72		234 50	92 00
Isabella.....	22,188 60	24,406 72	3,582 30	133 00	196 61	133 04
Isle Royal.....						
Jackson.....	14,098 40	16,128 53	2,007 20	2,620 66	168 25	93 00
Kalamazoo.....	10,150 00	11,168 68	1,772 42	2,198 29	148 11	77 11
Kalkaska.....	4,051 82	6,987 26	1,137 08	114 98	149 98	74 10
Kent.....	264,202 72	268,802 74	5,977 64	3,113 10	369 36	755 33
Keweenaw.....			553 48		44 50	22 00
Lake.....	1,877 50	2,643 09	1,732 60	6 9	129 60	68 88
Leapeer.....	80,343 50	31,198 92	1,823 48	1,310 71	157 15	71 11
Leelanau.....	2,181 74	2,258 69	1,808 86	19 56	183 00	68 00
Lenawee.....	11,100 00	14,537 05	1,732 50	2,524 95	268 25	369 80
Livingston.....	7,986 00	8,105 98	966 26	918 65	149 00	62 15
Luce.....	3,300 00	3,604 00	886 30		44 50	14 62
Mackinac.....	20,356 00	21,872 98	4,220 62	4 00	146 00	147 75
Macomb.....	2,479 00	2,702 12	387 96	1,511 79	149 50	58 75

TABLE VIII.—Continued.

Countries.	Bonded indebtedness of the districts.	Total indebtedness of the districts.	Amount due the districts.	Amount received by the districts for non-resident tuition.	Amount paid and due inspectors and members of school boards for services.	Amount paid and due township chairmen and officers for services.
Manistee	\$26,910 23	\$28,098 54	\$1,410 49	\$142 61	\$109 71	\$36 21
Manitou		100 00	1,200 00		36 50	24 00
Marquette	92,806 00	101,063 54	187 71	24 00	220 50	1,087 00
Mason	14,025 67	51,744 62	1,717 75	168 56	166 96	280 78
Mecona	4,637 00	6,699 97	4,845 40	98 98	218 96	361 02
Menominee	15,878 22	17,511 39	2,768 18	16 00	293 66	624 76
Midland	11,898 00	14,973 82	7,239 60	108 60	179 08	89 25
Missaukee	5,762 00	7,642 06	3,867 16	5 50	165 49	87 74
Monroe	12,243 00	19,388 88	281 64	896 24	223 28	143 53
Montcalm	14,591 00	17,934 84	5,495 18	454 69	263 93	139 48
Montmorency	1,100 50	3,734 26	3,652 23	24 19	96 78	68 18
Marathon	27,088 23	30,859 73	2,908 45	452 96	255 36	145 56
Newaygo	7,259 48	10,185 15	7,001 96	187 13	818 00	171 59
Oakland	21,630 75	22,769 49	408 91	2,826 42	295 80	126 85
Oceana	4,720 00	6,117 99	1,970 10	194 00	194 88	70 70
Ogemaw	6,125 50	7,885 88	8,486 81	6 75	146 89	89 48
Ontonagon	2,300 00	3,572 19	2,809 60		181 20	80 00
Oscoda	13,949 00	15,961 81	2,689 91	96 25	188 50	108 73
Oshtemo	1,215 00	2,042 28	1,226 79		70 50	36 93
Otsego	8,540 00	10,066 90	1,201 01	29 86	108 36	53 80
Ottawa	21,302 00	21,531 75	1,181 48	272 48	196 29	352 85
Presque Isle	4,900 00	9,960 78	6,806 85		100 75	109 47
Roscommon	1,180 00	2,116 68	1,218 72		79 00	31 08
Saginaw	71,212 00	71,507 23	8,769 54	666 92	387 63	2,847 78
St. Clair	37,368 00	41,291 58	1,146 35	380 88	244 35	174 10
St. Joseph	5,800 00	6,250 67	668 14	1,884 23	201 62	188 87
Sanilac	16,645 48	18,269 84	2,079 13	191 56	264 65	166 87
Schoolcraft	900 00	1,080 85	1,051 73		91 00	46 00
Shiawassee	17,878 66	21,597 68	484 66	1,269 93	115 85	354 10
Tuscola	46,218 57	47,793 15	3,888 89	1,044 74	247 75	137 66
Van Buren	12,247 57	14,326 26	1,987 87	1,681 59	218 05	70 75
Washtenaw	37,580 00	41,471 03	425 82	7,162 34	224 10	445 65
Wayne	83,514 27	84,760 29	269 77	2,708 94	827 45	891 80
Wexford	24,475 00	27,015 17	2,585 20	188 53	171 75	844 95

TABLE IX.

Cost per Capita of Public Schools of the State for the School year ending September 1, 1890.

Counties.	No. of pupils included in school census in—		No. of pupils enrolled in—		Cost per capita for instruction, based on school census in—			Cost per capita for instruction, based on enrollment in—			Total expenses per capita during year, based on enrollment in—		
	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.
Totals.....	347,487	307,015	208,214	218,818	\$5 55	\$4 56	\$5 06	\$9 21	\$6 39	\$7 79	\$17 97	\$8 98	\$13 87
Alcona.....	274	1,159	285	778	\$4 45	\$5 66	\$5 48	\$5 19	\$8 48	\$7 71	\$7 84	\$11 83	\$10 51
Alger.....	290	290	213	213	12 88	12 88	12 88	17 55	17 55	17 55	32 08	32 08	32 08
Allegan.....	3,981	8,428	3,170	6,285	5 75	4 06	4 60	7 22	5 43	6 08	10 11	7 45	8 34
Alpena.....	3,783	1,519	1,527	969	3 70	5 05	4 09	9 06	7 98	8 65	23 45	11 26	13 76
Antrim.....	1,161	2,097	1,028	1,474	7 06	6 14	6 47	7 97	8 78	8 42	13 19	13 16	15 68
Arenac.....	516	1,414	381	946	2 56	4 52	4 00	3 99	6 76	6 04	7 78	9 56	9 09
Baraga.....	863	806	564	196	5 44	8 66	6 29	3 32	14 84	9 81	11 78	22 60	14 49
Barry.....	1,640	5,873	1,144	4,790	6 59	4 70	5 11	9 45	5 55	6 47	17 02	7 23	9 16
Bay.....	14,707	4,631	7,477	2,293	4 37	3 31	4 12	3 59	6 69	8 15	15 50	10 66	14 36
Benzie.....	621	1,180	538	867	7 46	6 70	6 96	8 61	9 08	8 86	13 79	13 73	13 73
Berrien.....	6,218	6,441	4,680	4,741	5 97	4 70	5 32	8 02	6 38	7 19	17 68	6 78	12 13
Branch.....	2,684	4,906	2,256	3,563	7 86	4 86	5 91	9 18	6 17	7 28	14 07	8 24	10 89
Calhoun.....	7,404	5,511	4,760	4,401	5 53	5 77	5 63	8 61	7 22	7 94	17 51	9 25	13 66
Cass.....	1,710	4,396	1,442	3,448	7 74	5 87	6 40	9 17	7 44	8 15	15 96	9 32	11 28
Charlevoix.....	999	2,086	780	1,541	5 54	5 68	5 60	7 10	7 66	7 47	22 42	13 21	16 30
Cheboygan.....	1,914	1,500	1,162	1,133	4 67	5 27	4 96	7 69	8 37	8 02	18 97	13 40	16 30
Chippewa.....	1,584	1,303	991	1,177	4 26	4 33	4 30	6 81	6 68	6 71	14 46	9 51	11 94
Clare.....	948	1,106	663	814	5 18	6 46	5 85	7 34	8 78	8 13	10 87	17 73	14 65
Clinton.....	2,332	6,098	1,913	4,064	6 64	4 24	4 90	8 10	6 36	6 91	12 85	8 76	10 07
Crawford.....	840	867	275	815	7 21	15 66	11 60	8 91	18 25	18 90	26 32	30 42	28 69
Delta.....	2,945	1,582	1,438	1,047	4 22	5 37	4 62	8 39	8 11	8 27	22 96	13 10	13 87
Eaton.....	3,317	6,007	2,976	4,812	7 63	4 69	5 74	8 51	5 85	6 87	13 27	7 42	10 94
Emmet.....	1,148	1,359	814	849	5 82	6 18	6 02	8 21	9 90	9 07	23 25	14 04	13 55
Genesee.....	4,680	6,846	3,674	5,193	6 65	4 49	5 39	8 74	5 98	7 09	16 86	7 58	11 42
Gladwin.....	229	751	200	525	5 46	6 56	6 25	9 38	8 52	13 40	16 85	16 85	15 90
Gogebic.....	1,889	454	1,421	319	6 06	8 73	6 58	8 06	12 42	8 86	16 97	27 09	18 32
Grand Traverse.....	1,598	2,339	1,178	1,739	7 15	5 32	6 05	9 64	7 31	8 25	19 30	10 66	14 15
Gratiot.....	2,610	6,655	2,242	5,228	6 54	3 59	4 42	7 61	4 59	5 49	14 76	6 21	8 78
Hillsdale.....	2,742	5,826	2,172	4,764	6 86	4 85	5 49	8 66	5 93	6 78	18 79	7 89	11 30
Houghton.....	10,235	883	6,082	528	5 96	5 83	5 91	10 14	8 92	10 04	16 85	17 72	16 91
Huron.....	2,680	3,325	1,618	4,882	4 46	2 98	3 84	7 39	5 08	5 65	9 45	6 72	7 57
Ingham.....	5,913	5,169	4,390	3,798	6 12	4 65	5 44	8 25	6 83	7 8	13 57	8 68	11 30
Ionia.....	3,780	5,995	3,023	4,861	7 72	4 62	5 11	9 50	6 34	7 62	15 53	7 94	11 08
Iosco.....	3,508	889	1,672	590	4 22	4 22	4 22	8 86	6 70	8 11	16 23	9 78	14 61
Iron.....	895	393	625	222	6 09	7 15	6 41	8 72	12 65	9 75	18 01	22 31	19 12
Isabella.....	1,100	5,213	618	3,383	5 20	4 09	4 28	9 34	5 56	6 06	22 06	7 36	10 76
Iale Royal.....													
Jackson.....	6,789	5,746	4,813	4,890	6 90	5 15	6 10	9 73	6 75	8 31	18 76	9 06	11 53
Kalamazoo.....	6,582	4,890	4,899	3,508	8 06	5 84	5 97	9 09	7 62	8 44	14 52	10 71	12 68
Kalkaska.....	351	1,157	342	944	8 96	9 08	9 06	11 18	11 12	10 61	17 01	16 38	16 55
Kent.....	22,249	9,391	14,910	6,501	6 72	4 51	6 07	10 08	6 23	8 84	18 89	9 06	15 82
Keweenaw.....	708	296	345	126	8 88	10 49	5 85	7 96	15 00	10 48	10 26	19 75	13 58
Lake.....	846	990	871	769	6 80	7 06	6 84	8 32	8 31	8 58	12 92	12 63	13 23
Lapeer.....	3,269	6,438	2,749	4,810	6 47	4 22	4 97	7 69	5 69	6 42	13 89	7 49	9 82
Leelanau.....	420	2,348	276	1,506	4 42	4 06	4 12	6 73	6 32	6 39	8 56	8 52	8 53

COST PER CAPITA OF PUBLIC SCHOOLS.

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TABLE IX.—Continued.

Counties.	No. of pupils included in school census in—		No. of pupils enrolled in—		Cost per capita for instruction, based on school census in—			Cost per capita for instruction, based on enrollment in—			Total expenses per capita during year, based on enrollment in—			
	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.	Graded school districts.	Ungraded school districts.	All the districts.	All the districts.
Lacrosse.....	5,713	8,230	4,086	6,180	\$6 88	4 68	\$5 58	\$6 74	\$6 42	\$7 64	\$16 72	\$8 84	\$11 66	
Livingston.....	1,372	4,788	1,308	3,958	8 45	4 97	5 74	8 84	6 00	6 71	15 38	7 77	9 49	
Luce.....	278	167	288	114	6 04	8 78	7 08	6 98	12 87	8 96	9 79	21 56	13 60	
Marquette.....	962	190	744	728	5 77	6 48	6 11	7 46	8 13	8 94	16 45	13 02	14 76	
Macomb.....	3,887	6,729	2,579	8,687	5 03	8 33	3 96	7 78	6 08	6 78	12 64	8 52	10 22	
Manistee.....	5,138	2,473	2,866	1,451	5 18	4 58	4 95	9 24	7 81	8 76	22 00	11 27	18 40	
Manitowish.....		313		221		2 40	2 40		3 45	8 45		4 32	4 32	
Marquette.....	9,738	1,088	5,889	720	5 53	7 84	5 77	9 14	11 86	9 44	31 64	18 83	30 32	
Mason.....	2,814	2,278	2,444	1,868	6 61	5 48	6 10	7 61	7 48	7 55	14 46	11 48	13 25	
Mecosta.....	2,186	4,388	1,827	3,196	7 43	4 63	5 54	8 68	6 35	7 20	11 14	9 15	9 88	
Menominee.....	6,099	2,148	3,670	1,462	5 49	5 26	5 46	9 13	6 98	8 77	18 52	11 32	16 10	
Missaukee.....	896	2,554	713	1,561	6 80	4 80	5 35	9 40	6 48	7 28	16 90	10 32	12 12	
Missaukee.....	308	1,088	256	916	6 54	8 94	8 41	7 87	11 92	10 95	23 07	30 26	20 93	
Monroe.....	3,138	8,126	1,511	5,560	2 78	8 83	3 54	5 78	5 80	5 64	11 75	6 59	7 99	
Montcalm.....	2,308	6,962	3,060	4,818	7 03	8 66	4 79	8 06	5 29	6 96	13 65	7 92	10 16	
Montmorency.....	165	285	196	7 30	12 56	10 54	8 86	17 89	14 08	14 06	8 27	24 82		
Montmorency.....	9,976	3,878	6,625	2,821	6 82	4 27	5 75	9 50	5 87	8 43	27 18	8 11	21 48	
Neenah.....	1,473	4,709	1,103	3,577	5 33	4 66	4 82	7 12	6 14	6 87	11 67	9 59	10 09	
Neshota.....	4,347	6,677	3,750	5,068	7 58	5 62	6 39	8 58	7 42	7 91	15 90	9 24	12 08	
Oceana.....	1,183	3,968	1,024	3,064	5 69	4 29	4 61	6 57	5 60	5 84	12 47	8 23	9 29	
Ontonagon.....	413	1,011	384	790	4 54	7 90	6 93	5 64	10 11	8 77	9 20	14 60	12 99	
Ontonagon.....	642	270	454	180	11 76	13 83	12 37	16 68	20 64	17 77	22 35	34 73	26 24	
Oscoda.....	1,799	8,271	1,496	2,484	5 86	5 16	5 41	7 34	6 98	7 09	15 16	10 72	12 87	
Oscoda.....		439		348		7 61	7 61		9 60	9 60		15 30	15 30	
Oscoda.....	479	758	362	589	5 45	10 15	8 38	7 21	13 06	10 88	23 29	19 21	20 78	
Otsego.....	5,817	6,782	4,420	4,621	5 13	3 61	4 82	6 75	5 26	5 99	10 94	7 17	9 01	
Otsego.....	292	1,355	208	688	3 97	3 20	3 83	5 57	6 15	6 13	10 63	10 06	10 21	
Prairie Lake.....	345	144	258	140	5 49	16 01	8 57	7 55	16 48	10 78	8 76	24 98	14 52	
Shawano.....	18,083	9,040	10,060	5,488	5 19	8 53	4 65	9 65	5 32	8 29	20 68	7 50	16 09	
St. Clair.....	8,820	9,808	4,848	6,214	8 98	3 86	3 66	7 21	5 04	5 99	14 80	7 76	10 72	
St. Joseph.....	2,971	4,252	2,600	3,413	8 51	5 29	6 62	9 72	6 60	7 95	18 35	8 68	12 86	
St. Joseph.....	2,483	9,780	1,835	6,815	8 98	3 11	3 29	5 33	4 47	4 67	8 65	6 86	6 85	
Schoolcraft.....	871	516	387	10 78	7 75	9 02	16 22	11 86	13 72	20 43	18 45	19 28		
Shawano.....	33,70	5,737	2,968	4,315	7 60	4 19	5 45	8 68	5 57	6 83	18 00	7 54	10 57	
Tosco.....	29,44	7,548	2,414	5,489	5 69	3 46	4 07	6 94	4 95	5 56	11 77	7 28	8 65	
Van Buren.....	2,292	5,777	2,003	4,568	7 28	5 08	5 83	7 98	6 37	6 98	11 82	8 37	9 80	
Washburn.....	6,568	6,208	4,496	4,490	7 85	5 17	6 60	11 64	7 26	9 47	19 20	9 17	14 23	
Wayne.....	79,320	9,906	26,706	5,514	4 18	3 18	4 05	12 82	6 68	11 55	24 28	8 65	21 54	
Wexford.....	1,466	1,846	1,303	1,889	9 60	7 85	8 35	10 81	9 78	10 28	26 18	15 16	20 87	

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TABLE X.

Statistics of Township Libraries as reported by School Inspectors for the Year ending September 1, 1890.

Counties.	No. of townships using library monies for general school purposes.	No. of townships forfeiting library monies.	No. of townships maintaining libraries.	No. of volumes added to township libraries during year.	Whole No. of volumes in township libraries.	Amount paid for books and care of township libraries.	Amount of taxes voted for township libraries.	Amount of fines, etc., received from county treasurers for township libraries.
Totals.....	475	249	498	10,212	151,118	\$17,033 69	\$3,446 49	\$26,500 72
Alcona.....	2	3	3	94	929	\$148 63		\$123 23
Alger.....		3			338			
Allegan.....	12	4	11	220	3,346	410 78		321 01
Alpena.....	1	3	3		256	6 00		39 06
Antrim.....	1	2	12	240	2,695	294 98	\$11 50	96 75
Arenac.....	7	4						7 23
Baraga.....	1	1	2	75	526	100 00		
Barry.....	7	6	3	173	781	124 78		294 86
Bay.....	2	4	10	105	2,847	201 55	50 00	1,539 30
Benzie.....	1	1	10	35	1,601	96 51		68 53
Berrien.....	8	4	10	708	6,103	996 85	265 00	427 98
Branch.....	12	1	8	70	1,427	204 17		70 32
Calhoun.....	16	2	3	106	942	106 54		586 97
Case.....	8	2	6	50	2,239	54 95		123 55
Charlevoix.....	6	4	7	10	1,779	107 87	5 00	88 51
Cheboygan.....	7	3	4	49	686	45 50		304 20
Chippewa.....	5	2	4	43	593	95 00		549 82
Clare.....	2	3	6	280	758	285 94		116 30
Clinton.....	12	2	3	20	469	30 18		91 63
Crawford.....	8		7	64	1,636	190 15	75 00	149 93
Delta.....	4	5	3	34	315	23 15		87 72
Eaton.....	5	3	8	262	3,956	298 10	30 00	130 56
Emmet.....	2	3	7	279	1,518	450 95	807 76	138 88
Genesee.....	17		1		400	10 00		444 36
Gladwin.....	1	5	3	1	153	28 00		
Gogebic.....	1	3				250 00		694 55
Grand Traverse.....			18	165	4,058	413 21	185 00	295 51
Gratiot.....	11	5	1	77	582	61 22		117 05
Hilledale.....	14	3	2	8	415	35 50		69 73
Houghton.....	2	4	4	201	3,908	478 03		750 36
Huron.....	9	7	10	316	1,730	291 28		424 09
Ingham.....	14	2						96 24
Ionia.....	15	1			131			108 39
Iosco.....		4	6	287	1,534	341 15	25 00	69 59
Iron.....	2	4						
Isabella.....	5	3	8	15	988	64 50		88 12
Isle Royal.....								
Jackson.....	15	4	1	25	865	25 00		78 27
Kalamazoo.....	12	1	3	61	839	45 40	7 39	696 05
Kalkaska.....	4	3	5	5	320	42 92		31 06
Kent.....	11	2	11	731	4,351	692 02	25 00	1,978 49
Keweenaw.....	2	2	4		1,720	108 00		
Lake.....	2	2	9	82	1,761	203 75		142 78
Lapeer.....	10	3	6	80	1,310	82 55		129 69
Leelanau.....	1	1	10	8	1,548	72 14		10 00
Lenawee.....	7	3	7	74	6,005	174 29		143 31
Livingston.....	9	4	3	60	1,435	90 07		20 78
Luce.....	1	1	1	12	20		25 00	

TABLE X.—Continued.

Counties.	No. of townships using library mon- ey for general school purposes.	No. of townships forfeiting library money.	No. of townships maintaining libra- ries.	No. of volumes added to township libraries during year.	Whole No. of vol- umes in township libraries.	Amount paid for books and care of to township libra- ries.	Amount of taxes voted for township libraries.	Amount of fines, etc., received from county treas- urers for town- ship libraries.
Mackinac	4	1	6	38	1,159	\$22 00	\$25 00	\$229 77
Macomb	3	5	7	20	2,495	45 00		50 99
Manistee	2	1	9	192	2,501	239 97		345 82
Manitou	3	1	1	1	56	5 00		
Marquette	4	3	5	529	3,537	437 99		185 66
Mason	2	1	11	175	2,666	314 57	66 89	844 22
Meosta	5	1	10	305	2,298	289 29	157 18	283 91
Menominee	4	2	6	277	3,860	787 71	800 00	141 49
Midland	1	6	8	55	511	75 30		50 52
Missaukee	2	4	8	71	967	66 82	150 00	6 42
Monroe	2	4	9	23	2,111	94 60		24 26
Montcalm	5	5	11	84	2,298	154 50	25 00	91 84
Montmorency	3	4	2	2	287	15 00	100 00	
Muskegon	3	1	14	280	4,268	611 49	165 00	246 05
Newaygo	6	2	15	127	3,153	224 84	50 00	86 99
Oakland	17	4	4	83	2,155	146 96		188 47
Oceana	1	1	15	244	3,687	429 86	150 00	184 37
Ogemaw	5	6	6	268	1,504	137 25		225 02
Ontonagon	4	3						
Oscoda	3	2	11	69	2,433	280 93		141 32
Oscoda	4	4	1	1	894	40 00	30 00	65 11
Otsego	2	1	7	225	1,980	315 57		253 99
Ottawa	3	2	10	98	3,699	200 99	50 00	93 01
Presque Isle	2	7	1	2	69	3 00		
Roscommon	5		4		436	80 00	100 00	48 64
Saginaw	10	7	12	154	4,660	204 85		350 35
St. Clair	7	8	8	231	2,689	172 28		408 64
St. Joseph	10	3	3	666	5,927	2,657 56	850 06	22 40
Sanilac	13	4	11	158	1,538	168 75	5 00	189 81
Schoolcraft	2	2	1		258	52 00		
Shiawassee	10	5	2		977	15 00	10 00	114 98
Tuscola	8	5	10	112	2,412	118 45		80 96
Van Buren	11		8	349	4,325	299 34	150 00	305 95
Washtenaw	13	3	7	25	2,560	96 75		651 89
Wayne	9	5	5	150	4,631	235 01		9,283 07
Wexford	1		15	131	2,724	240 04	101 27	240 89

TABLE XI.

Statistics of District Libraries as Reported by School Inspectors for the year ending September 1, 1890.

Counties.	No. of districts of less than 100 children reporting libraries.	No. of volumes reported in such libraries.	No. of districts of 100 or more children maintaining libraries.	No. of volumes added to last mentioned libraries during the year.	Whole No. of volumes in such libraries.	Amount paid for support of such libraries.	Amount of fines, etc., received from county treasurer for such libraries.
Totals	762	43,418	337	34,070	311,184	\$70,310 42	\$29,248 44
Alcona			1	1	3		
Alger	1	28					
Allegan	29	1,314	17	240	2,485	\$319 89	\$259 10
Alpena			3	124	2,486	468 35	39 06
Antrim	2	60	2		159		
Arenac	3	128	1		115		24 18
Baraga	1	210	2	75	525	100 00	
Barry	7	215	2	43	1,721	118 10	268 39
Bay			5	731	14,761	162 00	177 75
Benzie			1		85		
Berrien	12	375	8	231	2,500	193 95	80 95
Branch	21	1,065	4	8	411	5 00	13 74
Calhoun	40	1,622	5	1,193	12,798	1,454 56	3,462 10
Cass	34	1,447	3	12	647	26 05	41 46
Charlevoix			3	27	222	8 00	15 29
Cheboygan			1	710	1,102	615 83	144 91
Chippewa	1	20	1	200	580	721 87	407 82
Clare							
Clinton	10	139	7	112	449	70 60	245 40
Crawford							
Delta	3	123	2	2	1,102	1 20	390 34
Eaton			4	130	789	74 63	52 43
Emmet	2	4	1	4	9		
Genesee	20	789	5	118	7,360	1,098 28	1,173 07
Gladwin							
Gogebic	1	70	2	142	298	740 03	
Grand Traverse			2	230	386	305 50	
Gratiot	9	302	6	936	2,562	309 25	188 45
Hilledale	27	682	6	72	964	158 88	50 79
Houghton			7	270	3,702	515 32	357 91
Huron	2	26	11	15	1,104	41 82	172 00
Ingham	10	459	3	560	6,376	1,145 73	655 17
Ionia	4	86	6	52	508	130 87	53 69
Iosco			2	174	774	65 20	152 16
Iron	2	41	1	200	450	122 51	254 88
Isabella	6	601	1	7	341	12 75	
Isle Royal							
Jackson	33	1,581	8	137	2,947	122 36	128 16
Kalamazoo	40	2,587	5	693	17,586	875 40	1,278 01
Kalkaska	8	416	1	60	300	54 80	2 00
Kent	18	889	8	1,063	26,676	7,677 18	4,069 23
Keweenaw	3	720					
Lake	2	23	2	79	236		
Lapeer	18	506	8	109	1,589	54 37	124 87
Leelanau			1	25	125	7 08	
Lenawee	54	2,923	12	3,414	12,078	1,180 24	113 30
Livingston	6	263	2	53	296	141 84	20 00

STATISTICS OF DISTRICT LIBRARIES.

xlv

TABLE XI.—Continued.

Counties.	No. of districts of less than 100 children reporting libraries.	No. of volumes reported in such libraries.	No. of districts of 100 or more children maintaining libraries.	No. of volumes added to last mentioned libraries during the year.	Whole No. of volumes in such libraries.	Amount paid for support of such libraries.	Amount of fines, etc., received from county treasurer for such libraries.
Luce.....	1	2	1	157	170	.....	\$348 58
Mackinac.....	1	6	1	.....	250	.....	.....
Macomb.....	7	193	12	207	3,170	\$277 24	339 52
Manistee.....	6	266	6	541	2,418	521 65	420 60
Manitou.....	1	30	.....	.....	.....	.....	.....
Marquette.....	.....	.....	4	1,034	9,792	1,595 88	372 07
Mason.....	1	40	1	229	1,796	153 70	264 70
Mecona.....	3	313	3	58	2,083	122 65	95 84
Menominee.....	3	217	3	505	2,135	874 15	426 90
Midland.....	10	417	3	82	1,141	110 35	.....
Milwaukee.....	10	345	.....	.....	.....	.....	.....
Monroe.....	4	106	3	191	2,945	228 02	300 00
Montcalm.....	3	99	7	120	1,198	75 34	.....
Montmorency.....	1	80	.....	.....	.....	.....	.....
Muskegon.....	.....	.....	5	7,537	13,177	9,367 82	390 02
Newaygo.....	5	316	3	21	290	15 75	.....
Oakland.....	27	1,237	4	312	1,919	28 50	96 55
Oceana.....	5	590	.....	.....	.....	.....	.....
Ogemaw.....	.....	.....	2	.....	1,643	.....	56 58
Ontonagon.....	4	309	.....	.....	.....	.....	.....
Oscoda.....	3	39	1	10	87	25 00	.....
Oscoda.....	.....	.....	.....	.....	.....	.....	.....
Otsego.....	1	98	.....	.....	.....	.....	.....
Ottawa.....	17	1,103	12	398	4,320	867 91	188 92
Presque Isle.....	8	359	1	.....	125	.....	.....
Roscommon.....	.....	.....	.....	.....	.....	.....	.....
Saginaw.....	25	1,582	13	1,064	15,740	2,093 79	303 91
St. Clair.....	26	925	3	93	2,337	260 23	156 40
St. Joseph.....	42	2,020	7	38	1,126	117 90	6 70
Sanilac.....	5	202	3	15	236	44 63	51 11
Schoolcraft.....	.....	.....	.....	.....	.....	.....	.....
Shiawassee.....	10	217	7	87	1,141	88 03	85 68
Tuscola.....	10	315	9	84	1,364	29 56	7 00
Van Buren.....	15	375	4	25	394	150 00	117 23
Washtenaw.....	6	239	6	563	6,110	840 23	553 72
Wayne.....	68	11,985	30	8,234	102,942	33,900 10	9,425 85
Wexford.....	.....	.....	1	3	157	32 43	349 82

TABLE XII.

Branches of Instruction as Reported by School Inspectors for the year ending September 1, 1890.

Counties.	No. of districts in which instruction is given in—												
	Orthography.	Reading.	Writing.	Arithmetic.	Geography.	English grammar.	U. S. History.	Civil government.	Algebra.	Geometry.	Physiology.	Natural philosophy.	Botany.
Totals	7,111	7,111	7,111	7,111	7,111	6,583	6,151	3,959	1,712	567	5,578	640	359
Alcona	23	23	23	23	23	21	21	11	8	1	18	1	2
Alger	11	11	11	11	11	9	5	3	1		11		
Allegan	184	184	184	184	184	177	159	91	46	14	136	12	8
Alpena	21	21	21	21	21	19	18	8	3	2	19	5	3
Antrim	68	68	68	68	68	61	64	42	7	5	51	5	4
Arenac	28	28	28	28	28	25	25	12	1		27		1
Baraga	10	10	10	10	10	9	6	3	2	1	4	2	1
Barry	140	140	140	140	140	132	126	100	33	4	116	5	4
Bay	58	58	58	58	58	54	50	28	10	9	46	6	3
Benzie	43	43	43	43	43	38	34	15	6	3	38	2	3
Berrien	148	148	148	148	148	139	133	68	87	11	128	16	7
Branch	130	130	130	130	130	126	123	78	42	25	89	12	4
Calhoun	162	162	162	162	162	152	143	98	58	6	187	10	7
Cass	114	114	114	114	114	110	108	72	52	9	98	11	7
Charlevoix	68	68	68	68	68	67	65	51	8	3	60	5	2
Cheboygan	49	49	49	49	49	35	36	23	5	2	41	2	1
Chippewa	39	39	39	39	39	35	34	23	1	2	32	2	2
Clare	96	96	96	96	96	86	86	12	1	2	19	1	
Clinton	129	129	129	129	129	120	120	85	26	5	106	9	4
Crawford	36	36	36	36	36	32	32	20	6	5	33	2	1
Delta	39	39	39	39	39	28	22	8	6	5	19	4	4
Eaton	147	147	147	147	147	143	127	92	42	19	110	21	10
Emmet	60	60	60	60	60	52	47	26	6	3	45	3	3
Genesee	160	160	160	160	160	156	151	97	45	7	122	12	3
Gladwin	25	25	25	25	25	23	20	10			18	4	
Gogebic	11	11	11	11	11	11	9	3	3	3	10	3	2
Grand Traverse	65	65	65	65	65	63	60	37	9	2	60	3	1
Gratiot	129	129	129	129	129	118	122	81	18	7	116	11	6
Hillsdale	167	167	167	167	167	161	146	80	69	13	142	16	13
Houghton	23	23	23	23	23	21	18	8	9	4	13	6	4
Huron	108	108	108	108	108	102	101	68	31	11	90	18	9
Ingham	134	134	134	134	134	115	109	69	32	9	96	9	7
Ionia	143	143	143	143	143	130	122	82	39	8	96	11	9
Iosco	24	24	24	24	24	22	22	15	8	6	21	7	6
Iron	13	13	13	13	13	10	8	4	4	4	9	3	2
Isabella	102	102	102	102	102	94	91	58	11	11	79	10	7
Isle Royal													
Jackson	157	157	157	157	157	154	146	81	64	22	123	15	9
Kalamazoo	134	138	138	138	138	123	134	84	46	9	104	14	8
Kalkaska	53	53	53	53	53	47	46	30	6	5	44	6	6
Kent	215	215	215	215	215	199	189	114	63	12	165	18	8
Keweenaw	9	9	9	9	9	8	5	6	5	2	8	2	1
Lake	45	45	45	45	45	36	33	24	3	2	33	5	2
Lapeer	136	136	136	136	136	133	124	86	34	10	99	11	7
Leelanau	54	54	54	54	54	47	43	27	7	1	47	1	
Lenawee	199	199	199	199	199	190	179	118	62	14	159	17	5

TABLE XII.—Continued.

Counties.	No. of districts in which instruction is given in—												
	Orthography.	Reading.	Writing.	Arithmetic.	Geography.	English grammar.	U. S. History.	Civil government.	Algebra.	Geometry.	Physiology.	Natural philosophy.	Botany.
Livingston.....	135	185	185	135	135	181	128	86	41	5	104	6	3
Lapeer.....	8	8	8	8	8	7	5	8	1	-----	6	-----	-----
Mackinac.....	81	31	81	31	31	80	22	10	2	-----	19	-----	-----
Macomb.....	118	113	113	113	113	107	98	69	37	11	99	11	7
Manistee.....	51	51	51	51	51	47	48	27	4	1	47	9	5
Manitowish.....	4	4	4	4	4	4	4	4	-----	-----	4	1	1
Marquette.....	23	38	23	23	33	30	28	11	8	4	28	6	4
Mason.....	54	54	54	54	54	51	50	30	4	1	48	2	1
Mecosta.....	97	97	97	97	97	90	82	59	13	7	77	14	7
Menominee.....	47	47	47	47	47	48	36	13	5	4	40	6	3
Midland.....	61	61	61	61	61	57	54	33	12	11	48	5	3
Missaukee.....	46	46	46	46	46	39	38	16	4	1	32	-----	-----
Monroe.....	137	137	137	137	137	124	126	72	20	7	91	7	4
Montcalm.....	136	136	136	136	136	113	106	66	26	11	90	18	9
Montmorency.....	19	19	19	19	19	17	17	11	2	2	17	2	1
Muskegon.....	89	89	89	89	89	88	80	38	13	5	72	7	8
Newaygo.....	109	109	109	109	109	108	98	71	22	14	85	8	8
Oakland.....	215	215	215	215	215	197	179	118	81	87	119	30	14
Oceana.....	88	88	88	88	88	81	75	43	9	4	71	5	4
Ogemaw.....	42	42	42	42	42	36	35	22	7	4	37	8	2
Ontonagon.....	18	18	18	18	18	16	11	8	4	2	11	2	-----
Oscoda.....	92	92	92	92	92	85	80	48	7	4	74	5	2
Oscoda.....	27	27	27	27	27	25	24	11	8	1	19	1	-----
Otsego.....	41	41	41	41	41	37	37	28	8	4	86	7	1
Ottawa.....	121	121	121	121	121	117	117	70	28	5	106	15	5
Presque Isle.....	32	32	32	32	32	28	25	11	-----	-----	26	-----	2
Rosecommon.....	17	17	17	17	17	16	14	11	2	1	14	8	-----
Saginaw.....	150	150	150	150	150	125	136	86	43	18	139	16	8
St. Clair.....	154	154	154	154	154	141	138	106	46	15	122	15	5
St. Joseph.....	124	124	124	124	124	107	106	71	32	8	88	10	8
Sanilac.....	188	188	188	188	188	136	123	118	49	16	144	18	2
Schoolcraft.....	19	19	19	19	19	15	11	7	2	1	13	1	-----
Shiawassee.....	128	128	128	128	128	121	116	79	24	10	136	18	8
Tuscola.....	143	143	143	143	143	136	130	93	35	15	125	20	8
Van Buren.....	153	153	153	153	153	144	136	85	89	12	122	9	10
Washtenaw.....	165	165	165	165	165	152	132	75	56	16	96	15	11
Wayne.....	154	154	154	154	154	149	143	76	47	14	95	14	10
Wexford.....	69	69	69	69	69	61	57	28	6	3	65	3	3

TABLE XIII.—*Private and Select Schools as reported for the Year ending September 1, 1890.*

Counties.	Private and select schools.				Counties.	Private and select schools.			
	No. of schools.	No. of teachers.		Estimated number of pupils.		No. of schools.	No. of teachers.		Estimated number of pupils.
		Men.	Women.				Men.	Women.	
Totals	314	286	483	83,975	Keweenaw	1	1	2	
Alcona					Lake				
Alger					Lapeer				
Allegan	5	3	2	170	Leelanau				
Alpena					Lenawee	10	11	932	
Antrim	1		1	4	Livingston	1	1	15	
Arenac					Luce				
Baraga	1		6	115	Mackinac				
Barry	2		2	27	Macomb	18	15	1,460	
Bay	14	12	15	2,819	Manistee	3	2	300	
Benzie					Manitou				
Berrien	9	5	5	841	Marquette	8	2	1,434	
Branch	2	3	1	22	Mason	2	1	100	
Calhoun	6	8	13	700	Meosota	5	5	855	
Cass					Menominee	6	1	645	
Charlevoix					Midland				
Cheboygan	2	1	4	200	Missaukee				
Chippewa	1		4	200	Monroe	8	6	340	
Clare					Montcalm				
Clinton	3	1	6	412	Montmorency				
Crawford					Muskegon	7	4	240	
Delta					Newaygo	3		160	
Eaton	1		1	20	Oakland				
Emmet	2	2	3	110	Oceana				
Genesee	5	7	12	347	Ogemaw	1	1	14	
Gladwin					Ontonagon				
Gogebic					Oscoda	2	1	83	
Grand Traverse	1	3		100	Oscoda				
Gratiot					Otsego				
Hilledale	4	2	2	50	Ottawa	5	4	170	
Houghton	8	9	9	1,321	Presque Isle	2	2	50	
Huron	12	7	7	884	Rosecommon				
Ingham	1		1	20	Saginaw	14	13	880	
Ionia	4	2	5	300	St. Clair	14	8	1,445	
Iosco	4	2	9	700	St. Joseph	3	4	132	
Iron					Sanilac	2	1	63	
Isabella	1	1		40	Schoolcraft				
Ile Royal					Shiawassee	2	1	40	
Jackson	8	3	3	113	Tuscola	5	4	140	
Kalamazoo	7	8	17	453	Van Buren	1	1	20	
Kalkaska					Washtenaw	8	7	475	
Kent	23	31	42	2,418	Wayne	60	84	12,560	
					Wexford	1	1	84	

TABLE XIV.

Examination and Certification of Teachers as reported by Secretaries of County Boards of School Examiners for the year ending September 1, 1890.

Counties.	No. of public exam- inations.	Whole No. of appli- cants for regular cer- tificates.	Whole No. of appli- cants for special cer- tificates.	Number of applicants receiving certificates.				No. licensed without experience in teach- ing.	No. of applicants hav- ing received some Normal instruction.	No. of applicants hav- ing attended insti- tutes during the year.	No. of teachers hold- ing State certificates.	No. of teachers hold- ing State Normal School certificates.	No. of legally quali- fied teachers in the county.	No. making teaching a permanent occupa- tion.	No. of teachers' cer- tificates suspended.	No. of teachers' cer- tificates revoked.
				First.	Second.	Third.	Special.									
Totals	487	16,667	1,339	211	580	10,453	1,070	2,554	1,463	5,283	69	339	11,946	4,925	13	5
Alcona.....	3	52	12	1	---	14	7	3	2	---	---	1	25	25	---	---
Alger.....	4	10	8	---	---	7	2	1	7	---	---	---	12	---	1	1
Allegan.....	4	363	13	9	35	250	13	96	32	55	7	8	337	25	---	---
Alpena.....	4	113	5	---	2	59	5	13	1	22	---	---	49	26	---	---
Antrim.....	5	124	27	1	3	97	25	22	5	43	1	3	135	40	---	---
Arenac.....	6	57	5	---	1	28	3	6	8	16	---	---	84	24	---	---
Baraga.....	4	35	7	1	---	20	7	13	4	15	---	1	36	15	---	---
Barry.....	7	285	24	2	10	205	24	71	8	52	---	5	240	73	---	---
Bay.....	5	122	16	2	5	68	13	11	24	64	---	1	77	46	---	---
Benzie.....	4	78	13	1	2	39	17	5	3	25	---	1	52	50	---	---
Berrien.....	8	410	37	3	14	300	35	50	20	205	---	5	327	240	---	---
Branch.....	7	323	23	1	6	192	16	47	41	130	---	4	214	134	---	---
Calhoun.....	7	334	4	8	20	234	4	51	27	90	---	6	285	60	---	---
Cass.....	7	461	5	5	11	204	5	68	70	73	---	9	280	90	---	---
Charlevoix.....	6	142	8	---	7	96	8	25	25	75	1	1	105	70	---	---
Cheboygan.....	5	100	12	2	3	43	8	6	9	32	1	---	52	17	---	---
Chippewa.....	5	85	15	---	1	50	11	11	3	25	---	5	56	---	---	---
Clare.....	9	63	16	2	1	50	16	5	25	30	---	1	53	30	---	---
Clinton.....	3	---	2	16	---	234	17	75	8	145	1	4	---	---	---	---
Crawford.....	4	50	17	1	5	30	14	4	8	20	---	1	48	40	---	---
Delta.....	3	62	12	1	3	40	8	10	---	18	---	1	60	18	---	---
Easton.....	6	330	25	5	7	211	16	34	15	125	---	---	284	106	---	---
Emmet.....	6	95	20	---	4	62	14	12	10	44	---	---	71	35	---	---
Genesee.....	3	365	---	3	8	178	---	56	26	153	---	2	258	121	1	---
Gladwin.....	4	84	13	---	---	26	13	8	9	22	---	---	16	14	---	---
Gogebic.....	3	27	6	---	3	17	6	3	2	17	---	---	25	25	---	---
Gd. Traverse.....	7	141	17	1	3	100	16	27	10	47	3	10	119	10	---	---
Grandt.....	7	350	70	5	6	192	49	43	18	63	1	17	221	83	---	---
Hillsdale.....	3	323	4	7	4	232	4	47	78	192	4	8	243	137	---	---
Houghton.....	4	157	4	12	13	76	4	23	12	45	---	29	133	100	---	---
Huron.....	4	207	40	4	12	101	15	20	5	112	3	1	160	95	---	---
Ingham.....	3	451	30	2	8	203	22	45	47	121	2	13	251	94	2	---
Ionia.....	3	---	27	5	---	228	26	59	12	116	1	3	133	---	---	---
Iosco.....	4	51	1	---	5	35	1	11	---	---	---	---	55	---	---	---
Iron.....	4	13	8	---	---	7	5	1	4	---	---	1	17	13	---	---
Isabella.....	7	202	28	---	1	118	15	12	21	80	2	4	130	90	---	---
Isle Royal.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Jackson.....	9	637	30	3	34	266	14	57	110	240	2	16	348	237	1	1
Kalamazoo.....	7	417	25	2	10	230	10	63	31	137	1	8	253	82	---	---
Kalkaska.....	4	123	7	1	8	63	6	17	7	27	---	---	1	75	40	---
Kent.....	3	669	35	2	21	350	32	98	35	---	---	5	391	---	---	---
Keweenaw.....	2	25	3	1	---	10	3	6	---	---	---	1	16	11	---	---
Lake.....	4	83	15	---	1	62	13	12	5	13	---	---	4	65	50	---
Lapeer.....	5	350	30	3	---	133	15	70	5	120	---	13	219	100	---	1
Leelanau.....	4	70	15	3	---	84	12	7	4	10	---	---	3	65	45	---
Lenawee.....	7	438	9	9	12	360	6	109	12	205	3	9	393	125	1	---
Livingston.....	7	400	12	---	7	278	4	50	10	125	2	4	300	150	---	---
Leos.....	4	7	3	---	---	5	3	2	1	---	1	---	9	7	---	---

SUPERINTENDENT'S REPORT.

TABLE XIV.—Continued.

Counties.	No. of public exam- inations.	Whole No. of appli- cants for regular cer- tificates.	Whole No. of appli- cants for special cer- tificates.	Number of applicants receiving certificates.				No. licensed without experience in teach- ing.	No. of applicants hav- ing received some Normal instruction.	No. of applicants hav- ing attended insti- tutes during the year.	No. of teachers hold- ing State certificates.	No. of teachers hold- ing State Normal School certificates.	No. of legally qual- ified teachers in the county.	No. making teaching a permanent occupa- tion.	No. of teachers' cer- tificates suspended.	No. of teachers' cer- tificates revoked.
				First.	Second.	Third.	Special.									
Mackinac.....	4	34	11	1	1	29	10	10	2	10			32	16		
Macomb.....	6	269	2	2	7	183	2	80	9	37	1	4	197	60		
Manistee.....	6	145	15		2	82	15	13	1	48			87			
Manitou*.....																
Marquette.....	6	106	6	2	5	88	6	20	5	60	3	10	110	115		
Mason.....	4	111	8		2	59	8	15	3				70			
Meocosta.....	6	219	30	6	28	183	21	61	4	105		3	190	22		
Menominee.....	5	71	24	8		54	23	20	24	37			72	36		
Midland.....	4	178			1	84	23	25	6	46		6	140			
Missaukee*.....																
Monroe.....	14	297	50	4	4	197	46	29	150	130		10	209	450		
Montcalm.....	7	325	27	11	8	190	27	58	23	55		1	230	35		
Montmorency.....	4	27	7			18	7	3	2	18			22	15		
Muskegon.....	8	196	35	4	7	146	23	25	36	66		4	165	102		
Newaygo.....	8	286	28	6	8	191	28	86	40	80	1		223	150		
Oakland.....	8	551	58	6	14	304	50	60	51	140	4	16	350	240	3	
Oceana.....	7	203	20	3	6	132	16	41	20	112			180	60		
Ogemaw.....	4	65	14		1	48	13	11	16	13	1		55	50		
Ontonagon.....	4	23	7	2		18	7	8	2	17		6	30	27		
Osceola.....	7	228	20	2	5	152	17	25	25	64			161			
Oscoda.....	4	25	8		1	13	6	3	4	9			15	4		
Otsego.....	6	44	5	1	2	38	4	13	6	25		1	43	40		
Ottawa.....	7	290	26	2	10	145	19	46	22	93	1	5	256	72		
Presque Isle.....	7	13	13			10	14	6				1	25	7		
Roscommon.....	6	20	5	1		16	5	4	8	8			17	13		
Saginaw.....	8	342	27	6	9	185	19	42	8	164	1	1	226	160		1
St. Clair.....	7	359	34		13	188	23	48	10	126	2	5	194	161		
St. Joseph.....	8	340	10	4	15	240		48	25	92	5	18	282	125		
Sanilac.....	6	366	20	5	26	186	13	48	8	92	3	1	216	199		
Schoolcraft.....	4	21	4		8	14	4				1		18	14		1
Shiawassee.....	6	340	16	6	9	259	16	63	4	160	1	2	283			
Tuscola.....	7	437	26	8	31	299	22					2	350			
Van Buren.....	6	468	5	3	6	230	2	42	36	32	3	15	272	150		
Washtenaw.....	8	290	10	7	7	264	8	67	76	105		8	281			
Wayne.....	8	331	6		4	231	4	72	11	86	2	12	253	114		
Wexford.....	8	96	1	3	6	87	1	20	22	47		2	97	46	4	

* No report received.

TABLE XV.

Condition of Schools and School Houses as Reported by Secretaries of County Boards of School Examiners for the year ending September 1, 1890.

Counties.	No. of districts visited by the secretary during the year.	No. of schools supplied with dictionaries.	No. of schools supplied with maps.	No. of schools supplied with globes.	No. of school-houses properly ventilated and heated.	No. of schools having uniform text-books in each branch.	No. of schools having a prescribed course of study.	No. of schools properly classified.	No. of schools in which physiology, etc., is taught.	No. of districts that have adopted text-book in physiology, etc.
Totals	6,827	4,485	3,554	2,589	2,708	5,227	2,217	3,884	6,855	3,617
Alcona.....	24	16	23	21	1	24	24	24	24	24
Alger.....	11	3	10	10	9	12	3	10	10	7
Allegan.....	184	147	39	67	120	170	80	178	161	-----
Alpena.....	36	28	32	26	2	40	45	45	39	-----
Antrim.....	60	37	36	32	43	40	-----	35	33	48
Arenac.....	28	19	24	15	21	26	-----	28	28	-----
Baraga.....	14	6	9	9	9	10	10	10	12	12
Barry.....	145	85	10	32	-----	75	3	-----	-----	-----
Bay.....	53	45	46	38	41	50	20	20	51	20
Benzie.....	48	29	21	15	30	37	3	17	44	-----
Berrien.....	140	109	60	48	*	185	80	110	148	148
Branch.....	130	86	66	63	111	121	41	123	125	-----
Calhoun.....	155	128	85	18	-----	†	163	125	163	†
Cass.....	114	90	60	45	114	107	5	114	114	114
Charlevoix.....	60	40	50	45	30	55	-----	25	60	50
Cheboygan.....	87	88	42	13	42	42	3	37	49	43
Chippewa.....	30	30	35	28	20	15	-----	20	39	-----
Clare.....	35	80	27	21	30	20	3	25	43	43
Clinton.....	129	80	20	35	12	125	129	-----	129	-----
Crawford.....	43	20	26	15	30	14	1	35	43	8
Delta.....	22	24	22	16	20	23	12	12	22	14
Eaton.....	146	75	35	25	21	128	146	125	146	-----
Emmet.....	55	35	25	14	31	48	††	-----	63	-----
Genesee.....	150	108	71	56	108	104	24	79	154	140
Gladwin.....	25	18	25	20	20	23	1	1	25	14
Gogebic.....	10	3	7	5	11	10	2	3	11	2
Grand Traverse.....	52	33	49	2	** 1	32	3	3	65	65
Gratiot.....	129	55	23	21	9	76	8	23	99	-----
Hillsdale.....	108	97	106	29	112	86	42	84	149	-----
Houghton.....	25	21	25	20	22	-----	-----	-----	25	-----
Huron.....	110	70	70	90	60	75	110	-----	100	95
Ingham.....	184	74	31	37	47	90	35	94	90	-----
Ionia.....	143	100	40	12	5	75	40	40	101	50
Iosco.....	20	17	9	8	6	20	8	7	25	-----
Iron.....	7	8	10	7	1	9	2	6	7	6
Isabella.....	94	29	37	23	29	91	-----	83	94	78
Isle Royal.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Jackson.....	160	120	80	42	150	152	30	90	130	150
Kalamazoo.....	139	109	93	78	19	111	90	73	128	-----
Kalkaska.....	53	32	29	26	40	33	49	45	53	45
Kent.....	217	150	125	120	25	200	31	120	180	195
Keweenaw.....	9	10	9	9	12	11	2	13	10	5
Lake.....	34	21	27	29	40	37	9	32	49	24
Lapeer.....	189	80	70	60	30	180	40	70	100	97
Leelanau.....	53	21	8	6	-----	47	4	38	51	51
Lenawee.....	199	144	84	72	129	175	†	120	174	186
Livingston.....	135	60	50	35	-----	86	36	75	125	-----
Luce.....	7	5	7	5	8	5	2	8	7	6
Mackinac.....	21	23	26	7	23	-----	8	-----	11	17
Macomb.....	110	60	80	25	80	90	25	110	110	65

TABLE XV.—Continued.

Counties.	No. of districts visited by the secretary during the year.	No. of schools supplied with dictionaries.	No. of schools supplied with maps.	No. of schools supplied with globes.	No. of school-houses properly ventilated and heated.	No. of schools having uniform text-books in each branch.	No. of schools having a prescribed course of study.	No. of schools properly classified.	No. of schools in which physiology, etc., is taught.	No. of districts that have adopted text-book in physiology, etc.
Manistee	50	32	42	23		48	17	43	49	49
Manitou										
Marquette	35	38	38	28	28	28	28	38	38	38
Mason	55	42	46	46	46	39	60	26	60	60
Mecona	100	65	58	39	75	35	101	55	101	39
Menominee	44	30	30	30	3	32	7	7	40	35
Midland	56	31	32	20	56	46	10	44	60	
Missaukee										
Monroe	120	100	120	50	75	100	2	60	120	120
Montcalm	133	96	65	45	41	101	8	24	124	100
Montmorency	19	12	16	15		19		22	22	
Muskegon	83	51	43	46	**	72	91	91	86	80
Nearago	100	84	41	5	42	50	38	60	100	61
Oakland	216	120	42	62	100	102	32	194	200	184
Oceana	36	65	60	45	70	34	3	5	75	80
Ogemaw	40	35	38	26	34	40		22	42	
Ontonagon	18	12	13	10	8	11	12	9	18	14
Oscoda	96	49	36	16	10	68	15	72	96	97
Oscoda	23	9	10	4	15	22		21	22	22
Otsego	40	30	39	38	4	28	1	31	37	3
Ottawa	116	112	89	78	* †	107	††		116	
Presque Isle	28	15	24	10	22	18		8	28	
Roscommon	20	4	10	4		3	3	8	4	1
Saginaw	149	183	129	83	50	145	17	75	146	140
St. Clair	151	80	31	31	6	110	8	107	125	108
St. Joseph	125	110	38	101	1	98	125	113	125	85
Sanilac	137	50	75	80		135	12	5	137	187
Schoolcraft	18	14	12	14	10	10	1	14	17	
Shiawassee	126	42	126	20	4	110	20	100	126	
Tuscola	143	77	66	41	6	180	40		140	140
Van Buren	153	93	58	35	120	105	8	97	148	
Washtenaw	168	124	90	29	127	110	110	76	168	168
Wayne	116	47	18	22	14	21	4	82	82	46
Wexford	70	60	63	48	59	55	70	60	71	60

* Generally well heated, but poorly ventilated.

† Nearly all.

‡ Very few.

§ Graded schools only.

** Nearly all fairly well heated and ventilated.

†† Many have lately adopted a course of study.

‡‡ Classification Register introduced.

TABLE XVI.

Miscellaneous Statistics as reported by Secretaries of County Boards of School Examiners for the year ending September 1, 1890.

Counties.	No. of meetings of Co. Teachers' Associations.	No. of meetings of Tp. Teachers' Associations.	No. of days devoted to meeting of the County Board.	Am't allowed by Board of Supervisors for stationery, etc.	Am't of per diem compensation received by members of the County Board other than the secretary.	Salary of the secretary.	Amount of institute fees collected.
Totals	161	195	1,130	\$4,886 21	\$9,784 64	\$63,350 00	\$9,679 00
Alcona	2	2	6	\$12 00	\$48 00	\$800 00	\$25 00
Alcona	10		4	4 00	80 00	200 00	7 00
Alcona	6	5	20	51 80	212 50	1,300 00	251 50
Alcona			42	5 09	232 00	400 00	60 00
Astoria	2		12		96 00	650 00	77 50
Avon	1		18		144 00	300 00	19 00
Baraga			4	25 50	32 00	300 00	12 50
Barry	4		12	83 58	184 00	1,000 00	195 00
Bay	4		18	70 00	144 00	530 00	52 00
Benzie	4		4	6 35	96 00	300 00	36 50
Berrien	1	5	10	156 28	85 00	1,000 00	286 00
Branch	3	7	21	93 00	168 00	1,800 00	204 50
Calhoun	2	5	32	200 00	256 00	1,300 00	272 00
Cass	2	6	35	90 62	250 00	800 00	185 50
Charlevoix			8	5 00	64 00	670 00	65 00
Cheboygan			14½	23 80	116 00	450 00	68 00
Chippewa	1		20	40 00	160 00	325 00	31 00
Clarke	2		13	40 00	96 00	430 00	48 00
Clinton	7		16		180 00	1,200 00	171 50
Crawford			12		48 00	400 00	25 50
Delta			5	50 00	44 00	300 00	30 50
Easton	3		15	185 00	80 00	1,450 00	209 00
Emmet			11	85 00	88 00	600 00	48 00
Genesee	4	26	4	75 00	32 00	1,400 00	131 50
Gladwin	2		8	30 00	64 00	200 00	17 50
Gogebic			6	300 00	48 00	10 00	16 50
Grand Traverse			20	70 00	156 00	650 00	64 00
Grafton	2	8				1,200 00	215 00
Hillsdale	4	8	10	72 00	148 00	1,400 00	218 00
Houghton	1		8	50 00	64 00	800 00	72 00
Huron				80 00	66 00	1,000 00	119 00
Ingham	5		32½	125 00	260 00	1,250 00	251 50
Ionia	3		8	200 00	64 00	1,425 00	216 00
Iosco	3					800 00	32 00
Iron	1		8	5 00	64 00	300 00	9 00
Isabella		1	15	48 72	144 00	900 00	76 00
Ile Royal							
Jackson	3	3	20	140 00	258 00	1,500 00	272 00
Kalamazoo	2	5	16	108 20	128 00	1,300 00	189 00
Kalamazoo	1		5	50 00	40 00	530 00	70 00
Kant	2	27	53	154 56	888 00	1,500 00	464 50
Keweenaw			4	8 50	32 00	100 00	14 00
Lake			10		96 00	500 00	46 50
Lapeer	3	5	10	80 00	160 00	1,200 00	201 00
Leelanau	2		12	81 50	186 00	500 00	51 50
Leonsue			20	112 50	160 00	1,200 00	218 50
Livingston	2	26	16		128 00	1,000 00	209 50

SUPERINTENDENT'S REPORT.

TABLE XVI.—Continued.

Counties.	No. of meetings of Co. Teachers' Associations.	No. of meetings of Tp. Teachers' Associations.	No. of days devoted to meeting of the County Board.	Am't allowed by Board of Superintendents for stationery, etc.	Am't of per diem compensation received by members of the County Board other than the secretary.	Salary of the secretary.	Amount of institute fees collected.
Luce			6		\$48 00	\$150 00	\$2 50
Mackinac			17	\$35 00	196 00	320 00	26 00
Macomb	2	3	30	125 00	220 00	1,100 00	102 50
Manistee			7		56 00	520 00	63 00
Manitou							
Marquette	1		20	200 00	160 00	380 00	84 50
Mason			37	116 05	148 00	560 00	45 50
Meosota	2	13	6	168 00	128 00	1,000 00	97 00
Menominee	1		10	15 00	44 00	450 00	98 00
Midland	2		15	30 65	125 14	450 00	72 00
Missaukee							
Monroe	2	3	25	75 00	200 00	800 00	158 50
Montcalm	3	4	8	31 00	208 00	1,100 00	195 00
Montmorency			8	25 00	64 00	300 00	15 00
Muskegon	4		10		80 00	910 00	100 50
Newaygo	4	4	35	50 00	280 00	1,150 00	91 50
Oakland			26	80 00	208 00	1,500 00	255 50
Oceana	5	1	10		80 00	350 00	110 50
Ogemaw	3		12		48 00	420 00	27 50
Ontonagon	4		11	15 00	88 00	300 00	22 00
Oscoda	2		12	60 00	96 00	700 00	80 00
Oscoda	2		4	12 05	32 00	250 00	19 50
Otsego			15	11 25	120 00	300 00	34 00
Ottawa	14		17		68 00	1,150 00	127 50
Presque Isle			9		72 00	300 00	23 00
Rosecommon			6	3 00	36 00	250 00	14 00
Saginaw		4		200 00		1,470 00	255 00
St. Clair		10	12	84 00	96 00	1,400 00	210 50
St. Joseph	2	9	9	72 91	100 00	1,250 00	218 50
Sanilac	3	8	8	100 00	64 00	1,200 00	220 00
Schoolcraft	2		12		96 00	300 00	
Shiawassee	4	2	20	2 00	160 00	1,100 00	262 50
Tuscola	3		21	32 20	168 00	1,450 00	295 00
Van Buren	6		12	101 30		1,200 00	250 00
Washtenaw			17	69 00	186 00	1,500 00	178 50
Wayne	2		12	200 60	96 00	1,500 00	418 50
Wexford			8		64 00	600 00	45 50

TABLE XVII.

Showing the Extent to which Physiology was Taught in the Schools of the State during the year ending September 1, 1890, compiled from Inspectors' reports.

Counties.	Number of districts in county.	No. of districts reporting physiology taught.	No. of districts reporting physiology not taught.	No. of districts not reporting.
Totals	10,810	5,701	4,768	341
Alcona	26	22	1	3
Alger	12	11	1	1
Allegan	238	149	58	26
Alpena	52	17	33	2
Antrim	85	58	27	0
Arenac	81	29	0	2
Baraga	17	15	0	2
Barry	173	118	48	7
Bay	205	144	55	6
Benzie	58	50	0	3
Berrien	287	120	0	117
Branch	173	104	69	0
Calhoun	266	232	33	1
Cass	144	102	41	1
Charlevoix	82	65	10	7
Cheboygan	66	58	7	1
Chippewa	48	34	13	1
Clare	47	34	12	1
Clinton	163	108	53	2
Crawford	40	34	6	0
Delta	58	26	27	5
Eaton	201	108	85	8
Emmet	73	44	26	3
Genesee	229	136	89	4
Gladwin	27	20	4	3
Gogebic	27	12	14	1
Grand Traverse	87	61	25	1
Gratiot	168	121	44	3
Hilledale	210	138	50	22
Houghton	137	18	117	2
Huron	128	119	3	6
Ingham	213	112	97	4
Ionia	203	100	99	4
Iosco	58	24	27	2
Iron	20	10	9	1
Isabella	115	64	25	6
Ile Royal	250	135	105	10
Jackson	226	106	114	6
Kalamazoo	58	55	0	3
Kalkaska	394	169	225	0
Kent	13	9	3	1
Keweenaw	51	39	12	0
Lake	131	98	78	5
Lapeer	66	53	11	2
Leelanau	287	170	115	2
Lenawee	168	104	57	2
Livingston	10	8	0	2
Loce	46	22	21	3
Mackinac	152	112	88	2
Macomb	111	57	54	0
Manistee				

SUPERINTENDENT'S REPORT.

TABLE XVII.—*Continued.*

Counties.	Number of districts in county.	No. of districts reporting physiology taught.	No. of districts reporting physiology not taught.	No. of districts not reporting.
Manitou.....	4	4	0	0
Marquette.....	121	26	93	2
Mason.....	94	46	46	2
Mecosta.....	130	96	34	0
Menominee.....	106	42	63	0
Midland.....	75	60	15	0
Missaukee.....	47	39	8	0
Monroe.....	174	120	50	4
Montcalm.....	186	100	82	4
Montmorency.....	22	20	2	0
Muskegon.....	204	73	131	0
Newaygo.....	122	116	6	0
Oakland.....	278	132	142	4
Oceana.....	98	76	22	0
Ogemaw.....	46	46	0	0
Ontonagon.....	29	13	16	0
Osceola.....	112	83	36	1
Oscoda.....	26	25	1	0
Otsego.....	45	37	8	0
Ottawa.....	187	109	78	0
Presque Isle.....	35	28	7	0
Roscommon.....	21	19	2	0
Saginaw.....	348	136	212	0
St. Clair.....	238	122	116	0
St. Joseph.....	179	77	102	0
Sanilac.....	155	126	29	0
Schoolcraft.....	23	17	6	2
Shiawassee.....	178	105	61	12
Tuscola.....	180	131	46	3
Van Buren.....	199	127	72	0
Washtenaw.....	270	117	143	5
Wayne.....	683	107	586	0
Wexford.....	97	68	34	0

GRADED SCHOOL STATISTICS.

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TABLE XVIII.—Graded School Statistics compiled from School Inspectors' Reports for the year ending September 1, 1890.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children attending school during the year.	No. of days school.	No. of teachers employed.		Aggregate No. of months taught by all the teachers.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.	Men.	Women.
Totals		347,487	\$9,540,702	\$1,864,698 62			\$3,738,408 61	\$1,616,272 46	204,244	97,148	637	3,739	6,218	85,247	\$490,083 81	\$1,443,064 89
Ada	Kent	145	\$5,500	\$890 75	\$50 00	\$28 00	\$1,054 06	\$55 00	131	198	1	1	10	10	\$500 00	\$280 00
Addicks	Lenawee	142	1,800	1,804 00	77 00	28 00	1,502 94	185	185	180	2	2	9	15	700 00	504 00
Adrian	Lenawee	2,526	104,000	15,024 00	145 00	41 80	24,434 11	1,380	1,380	186	8	29	20	20	2,900 00	12,134 64
Akron	Tuscola	130	1,500	680 00	38 00	27 00	1,110 11	1,000 00	80	200	1	1	10	10	380 00	270 00
Alba	Antrim	159	4,000	765 00	50 00	35 00	3,248 69	2,200 00	97	180	1	1	9	9	450 00	315 00
Albion	Calhoun	1,216	55,000	6,308 00	110 00	24 20	12,188 11	4,000 00	968	187	1	16	10	152	1,100 00	5,308 00
Alaska	Kent	83	2,000	564 00	50 00	23 80	747 91	200 00	58	180	1	2	9	5	450 00	114 00
Algenac	St. Clair	340	9,000	1,575 00	75 00	\$3 38	2,344 86	140 57	278	180	1	3	9	27	675 00	900 00
Allegan	Allegan	844	12,000	6,084 00	84 20	57 60	9,077 94	500 00	609	180	2	13	19	119	1,800 00	4,484 00
Allen	Hilledale	124	8,000	932 50	60 50	24 20	1,227 22	98	98	180	1	2	9	16	545 00	357 50
Allouez	Keweenaw	397	2,000	1,171 25	65 00	36 60	1,345 44	156	156	180	1	2	9	16	555 00	596 25
Alma	Gratiot	539	20,000	3,292 50	100 00	81 58	6,303 89	16,500 00	329	200	2	8	10	72	1,000 00	2,392 50
Almont	Lapeer	327	15,000	2,082 00	80 00	33 80	4,035 94	4,500 00	281	200	1	4	10	39	1,000 00	1,282 00
Alpena	Alpena	8,733	55,000	13,890 00	128 00	36 90	35,811 86	1,527	1,527	200	8	27	30	270	3,850 00	9,980 00
Ann Arbor	Washtenaw	2,986	205,000	27,341 00	125 00	43 80	46,491 36	27,151 06	1,975	196	8	42	78	416	9,780 00	17,561 00
Armada	Macomb	220	6,000	1,488 00	88 00	27 30	2,068 80	286	286	176	1	3	9	27	750 00	788 00
Ashley	Gratiot	279	3,000	1,045 00	53 25	27 50	1,975 54	1,287 00	315	180	1	2	10	19	522 50	532 50
Ashmun	Calhoun	154	3,000	990 00	60 00	25 00	1,253 90	125	125	178	1	2	9	18	540 00	450 00
Atlantic Mine	Houghton	382	5,800	1,840 00	90 00	47 30	2,836 86	248	248	194	1	2	16	20	900 00	940 00
Attica	Lapeer	194	800	921 20	49 75	24 82	1,184 83	142	142	197	1	2	10	17	497 50	423 75
Augusta	Kalamazoo	163	7,000	1,438 00	60 00	33 20	2,899 75	164	164	177	1	4	9	27	540 00	598 00
An Sable	Iosco	1,308	8,000	5,147 50	87 12	40 50	8,098 62	960 75	527	195	2	11	20	84	1,743 50	3,405 00
Bad Axe	Huron	351	5,000	1,600 00	70 00	30 00	2,266 86	3,000 00	242	200	1	3	10	30	700 00	900 00
Baldwin	Lake	150	2,500	980 00	60 00	35 00	1,773 47	1,000 00	165	200	1	1	10	10	600 00	850 00
Bancroft	Shiawassee	166	6,000	1,560 00	60 00	32 00	2,780 72	3,768 66	159	197	1	3	10	30	600 00	960 00
Bangor Tp. 3 d	Van Buren	256	4,000	2,232 00		47 50	2,614 59	353	353	190		5		47		2,332 00
Bangor Tp. 3 d	Van Buren	80	2,000	657 00	45 00	28 00	717 25	69	69	180		1	9	9	405 00	253 00
Baraga	Baraga	355	3,000	1,270 00	75 00	40 00	2,112 50	253	253	200	1	1	2	10	750 00	530 00
Bath	Calhoun	140	3,000	897 50	50 00	24 84	1,217 57	189	189	195	1	2	10	16	500 00	397 50
Battle Creek	Calhoun	4,138	200,000	19,084 88	128 00	35 81	45,986 87	17,246 00	2,200	195	2	50	20	462	2,500 00	16,584 88
Bay City	Bay	9,428	204,000	33,344 95	108 00	39 32	73,161 31	5,300 00	4,179	198	5	86	30	690	5,401 00	33,983 95
Beacon	Marquette	357	15,000	7,779 00	120 00	60 50	18,032 15	4,000 00	620	200	3	7	30	69	2,800 00	4,179 00

TABLE XVII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for subsistence and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children attending school during the year.	No. of days school.	No. of teachers employed.		Aggregate No. of months taught by all the teachers.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.			Men.	Women.
Bear Lake	Manitowish	146	\$4,000	\$1,135 00	\$80 00	\$48 00	\$2,457 60	\$814 87	165	180	1	1	9	15	\$540 00	\$845 00
Belding	Ionia	558	8,000	2,900 00	80 00	30 00	8,139 82	2,450 00	337	200	1	1	10	50	1,500 00	1,500 00
Bellaire	Antrim	150	6,000	855 00	80 00	35 00	5,978 97	5,000 00	120	178	1	1	9	9	840 00	815 00
Bellefleur	Wayne	176	10,000	1,330 00	54 50	24 00	1,676 57		141	200	2	1	20	10	1,000 00	240 00
Bellevue	Eaton	399	7,000	1,310 00	42 50	29 00	2,222 66		253	180	2	4	18	38	766 00	1,044 00
Benton Harbor 5 fl	Berrien	134	3,000	665 00	55 00	35 00	765 51		107	160	1	1	7	8	395 00	290 00
Benton Harbor 9 fl	Berrien	1,179	35,000	6,578 75	133 30	35 35	10,330 96	10,000 00	900	180	1	13	9	152	1,200 00	5,373 75
Berlin	Ottawa	111	1,000	720 00	40 00		960 10		97	180					720 00	
Berrien Springs	Berrien	221	8,000	1,790 00		38 40	2,743 81		185	190					1,730 00	45
Bessemer	Gogable	491	12,000	3,500 00	130 00	50 00	7,652 71	2,000 00	456	196	1	6	10	50	1,200 00	2,500 00
Big Rapids	Meecosta	1,423	50,000	11,365 00	150 00	41 20	14,316 80		1,218	195	1	24	10	240	1,500 00	9,886 00
Birmingham	Oakland	335	12,000	2,954 00	67 50	32 70	3,547 67		318	200	2	7	20	49	1,350 00	1,604 00
Blissfield 1 fl	Lenawee	200	5,000	1,310 00	75 00	28 60	1,897 50		188	197	1	3	10	30	750 00	860 00
Blissfield 2 fl	Lenawee	213	3,500	1,500 00	65 00	28 33	2,054 86		183	196	1	3	10	30	650 00	860 00
Bloomington	Van Buren	152	3,000	1,150 00	50 00	29 10	1,915 59	500 00	188	180	1	8	9	24	450 00	700 00
Boysie City	Charlevoix	151	5,000	1,026 00	50 00	32 00	2,506 80	2,000 00	130	178	1	2	9	16	450 00	576 00
Breckenridge	Gratiot	118	1,000	697 50	47 50	30 00	766 15		103	177	1	1	9	9	427 50	270 00
Breeshville	Van Buren	129	1,200	702 00	50 00	28 00	910 02		85	180	1	1	9	9	450 00	232 00
Bridgeshampton Tp. 2	Sanilac	147	500	602 25	50 00	17 41	637 78		103	230	1	1	11	3	550 00	13 25
Bridgeport	Saginaw	125	2,500	747 00	50 00	33 00	1,104 42		114	180	1	1	9	9	450 00	297 00
Brighton	Livingston	233	16,000	1,890 00	80 00	27 20	2,179 11		203	196	1	4	10	40	800 00	1,080 00
Britton	Lenawee	117	2,350	660 00	38 00	28 00	717 34		85	200	1	1	10	10	880 00	290 00
Brown	Branch	948	5,000	1,400 00	77 70	33 83	2,238 38		272	180	1	3	9	27	700 00	900 00
Brooklyn	Jackson	231	7,000	1,854 82	52 50	30 23	2,871 40		210	200	3	3	20	20	1,060 00	694 62
Brown City	Sanilac	206	3,600	720 00	50 00	32 00	1,981 00	3,000 00	152	200	1	1	10	10	500 00	220 00
Buchanan	Berrien	550	40,000	4,418 75	100 00	33 83	6,420 05		564	190	1	11	9	104	900 00	3,515 75
Buena Vista Tp. 6	Saginaw	338	4,000	850 00	50 00	35 00	1,208 95		102	200	1	1	10	10	500 00	350 00
Burlington	Calhoun	127	2,000	633 75	43 75	30 00	1,272 39		124	170	1	1	9	13	398 75	260 00
Burns Corners	Allegan	105	2,500	708 75	53 41	25 00	1,596 32		112	180	1	1	9	9	450 75	225 00
Burnside	Lapeer	146	2,000	558 00	40 00	22 00	947 80	25 00	177	175	2	1	9	9	860 00	168 00
Burr Oak Tp. 5 fl	St. Joseph	233	15,000	1,215 00	60 00	25 00	1,898 83		208	180	1	8	9	27	540 00	675 00
Buttersville	Mason	163	4,000	1,260 00	50 00	30 00	2,319 36	1,125 00	153	180	1	3	9	27	450 00	810 00
Byron Center	Kent	124	2,300	717 50	50 00	25 27	1,365 00		106	180	1	1	9	9	450 00	237 50
Byron	Shiawassee	123	2,500	1,125 00	70 00	25 50	1,377 13	80 00	144	197	1	2	10	19	700 00	465 00

GRADED SCHOOL STATISTICS.

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Cadillac.....	1,212	85,000	11,940 00	125 00	31,350 19	1,045	197	2	21	30	204	3,500 00	9,480 00
Caladonia.....	179	1,900	270 00	95 00	1,090 09	197	195	7	19	00	838	6,390 00	10,675 00
Calumet.....	5,638	7,000	28,250 00	96 80	31,715 27	2,418	200	1	5	10	9	475 00	1,121 35
Calumet.....	219	3,500	1,131 25	40 00	1,548 96	130	178	1	1	9	9	550 00	216 00
Canonsburg.....	118	1,000	691 00	53 70	761 56	93	200	1	4	10	30	550 00	890 00
Capoe.....	211	7,000	1,410 00	55 00	2,454 89	232	200	1	1	9	9	380 00	263 00
Carleton.....	141	2,500	632 00	44 40	797 28	87	190	1	1	9	10	1,000 00	3,610 00
Caro.....	536	20,000	2,810 00	28 10	6,300 84	501	200	2	10	20	100	1,000 00	760 00
Carrollton Tp. No. 1.....	491	10,000	1,780 00	50 00	3,394 09	394	195	2	2	20	30	500 00	1,550 00
Carrollton Tp. No. 2.....	298	2,400	850 00	50 00	1,218 22	136	196	1	1	10	10	500 00	1,558 00
Carson City.....	832	14,000	2,408 00	81 18	10,400 70	393	196	1	5	10	10	400 00	200 00
Carsonville.....	213	2,000	650 00	45 00	836 36	161	200	1	1	10	10	400 00	200 00
Cassville.....	287	5,000	1,350 00	65 00	1,621 47	197	200	1	2	10	20	650 00	700 00
Cassville.....	102	2,500	835 00	60 00	1,084 23	136	190	1	1	9	9	540 00	315 00
Cass City.....	324	9,000	1,725 00	30 50	2,397 49	283	195	1	8	10	30	800 00	928 00
Cassopolis.....	424	20,000	3,642 80	96 00	7,686 43	350	200	1	9	10	76	960 00	2,032 80
Cedar Springs.....	371	20,000	2,429 00	42 60	3,348 75	265	197	1	7	10	57	765 00	2,429 00
Central Mine.....	841	7,000	1,575 00	85 00	2,193 41	189	190	1	2	9	18	765 00	810 00
Centerville.....	271	18,000	2,528 00	65 00	5,447 75	290	200	2	4	20	40	1,300 00	1,225 00
Ceresco.....	80	1,500	548 00	50 10	617 50	65	190	1	1	9	5	435 00	90 00
Charlevoix.....	411	17,000	2,615 00	105 00	5,968 93	353	180	1	6	9	54	960 00	1,065 00
Charlotte.....	988	42,000	10,724 25	113 50	21,457 62	1,007	198	2	20	20	200	2,250 00	8,474 25
Chase.....	175	3,000	1,215 00	65 00	1,612 26	140	180	1	2	9	18	535 00	630 00
Cheboygan.....	1,737	12,000	8,161 25	66 10	21,186 82	1,071	198	6	12	55	118	3,640 00	4,521 25
Chebecon.....	463	8,000	3,221 00	70 00	4,640 86	355	198	1	9	10	73	700 00	2,521 00
Chebecon.....	397	15,000	2,456 00	70 00	4,291 85	364	197	1	6	10	60	700 00	1,785 00
Chickaming Tp. 3.....	158	400	280 00	32 50	287 24	106	145	1	1	4	4	130 00	100 00
Chippewa Lake.....	102	2,400	900 00	55 00	1,065 40	104	200	1	1	10	10	550 00	360 00
Clare.....	496	3,000	1,746 75	65 00	2,478 90	265	200	1	6	10	36	660 00	1,130 00
Clarkston.....	134	3,000	1,390 00	75 00	1,642 86	156	197	1	2	10	20	750 00	1,540 00
Clayton.....	100	8,000	964 00	60 00	1,066 68	106	180	1	1	9	9	540 00	270 00
Clifford.....	168	8,100	525 00	45 00	825 25	110	188	1	1	7	7	315 00	210 00
Climax.....	136	4,000	945 00	45 00	1,164 29	126	180	1	2	9	18	405 00	540 00
Clinton.....	231	7,000	1,960 00	80 00	2,457 67	235	196	1	4	10	40	600 00	1,160 00
Clio.....	228	6,000	1,150 00	60 00	1,908 03	135	195	1	2	10	20	900 00	1,550 00
Coldwater.....	1,319	42,000	10,786 00	123 30	15,776 40	1,156	197	3	20	30	200	3,700 00	7,086 00
Coleman.....	188	1,900	850 00	50 00	1,521 57	106	196	1	1	10	10	500 00	850 00
Coloma.....	153	300	535 00	40 00	673 57	140	180	1	1	9	9	390 00	225 00
Colombianville.....	177	3,000	1,215 00	45 00	1,482 86	144	180	1	3	10	27	500 00	1,215 00
Comstock Tp. 1 fl.....	109	700	540 00	35 00	559 93	69	180	1	1	9	9	315 00	225 00
Concord.....	193	6,000	2,016 00	80 00	2,544 53	186	187	1	4	10	38	800 00	1,216 00
Constantine.....	332	35,000	3,700 00	120 00	4,563 95	295	197	1	7	10	70	1,200 00	2,500 00
Coopersville.....	285	5,000	1,394 50	62 00	1,735 51	212	187	1	3	9	28	538 00	941 50
Coral.....	165	3,000	850 00	50 00	1,011 12	150	196	1	1	10	10	500 00	350 00
Cortuna.....	418	25,000	3,700 00	100 00	8,033 43	396	200	1	8	10	80	1,000 00	2,700 00

SUPERINTENDENT'S REPORT.

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for superintendence and instruction.	Average monthly wages of teachers.		Total expenditures.	No. of children that attended school during the year.	No. of days school.	No. of teachers employed.		Aggregate No. of months taught by all the teachers.		Total wages of teachers for the year.	
					Men.	Women.				Men.	Women.			Men.	Women.
Covert	Van Buren	194	\$2,500	\$338 00	\$51 00	\$35 00	\$1,285 29	146	170	1	2	8	17	\$408 00	\$425 00
Crowell	Seneca	303	6,000	1,200 00	65 00	27 75	4,542 28	232	200	1	1	10	20	650 00	550 00
Cystal Falls	Iron	349	8,000	3,150 00	59 75	38 75	6,016 98	280	136	1	4	4	40	2,150 00	2,150 00
Custer	Macon	142	2,500	765 00	50 00	35 00	1,294 66	107	180	1	1	9	9	450 00	815 00
Danville	Ingham	125	4,000	1,381 00	60 00	38 20	1,979 98	113	190	1	4	10	28	900 00	791 00
Davidsburg	Oakland	64	1,200	467 00	38 00	25 00	547 10	70	178	1	1	9	5	842 00	123 60
Davison	Genesee	160	5,000	945 00	50 00	21 90	1,770 87	128	180	1	2	9	18	450 00	498 00
Deerborn	Wayne	328	2,500	915 00	66 60	35 00	1,241 86	160	180	1	1	9	9	600 00	815 00
Deerfield	Van Buren	346	15,000	3,180 00	100 00	36 50	5,616 21	384	200	1	7	10	60	1,000 00	3,180 00
Deer Lake	Lenawee	283	5,000	1,500 00	66 60	25 00	1,708 28	158	178	1	4	9	38	600 00	900 00
	Lake	118	800	720 00	50 00	30 00	884 31	80	180	2	1	9	9	450 00	270 00
Detroit	Wayne	72,673	1,591,100	287,836 88	156 70	57 57	596,352 66	22,211	200	21	470	210	4,700	32,697 50	270,684 37
De Witt	Clinton	123	7,000	860 00	40 90	28 00	1,183 45	100	180	1	3	10	60	1,000 00	800 00
Dexter	Washtenaw	323	18,000	2,740 00	160 00	29 00	3,967 15	260	200	1	6	10	60	1,740 00	1,740 00
Dimondale	Easton	114	2,000	675 00	45 00	30 00	874 25	79	175	1	1	9	9	405 00	270 00
Dollar Bay	Houghton	171	---	1,000 00	60 00	40 00	1,648 66	124	200	1	1	10	10	600 00	400 00
Douglas	Allegan	179	3,000	1,340 00	88 80	30 00	1,727 44	135	178	1	2	9	18	800 00	540 00
Dowagiac	Cass	747	20,000	5,590 00	65 90	38 90	9,908 10	597	166	4	9	36	87	2,375 00	3,215 00
Downington	Sanilac	301	8,800	338 00	50 00	24 40	1,909 00	200	200	1	3	7	20	350 00	488 00
Drenthe	Ottawa	105	2,500	534 00	46 66	19 00	1,116 67	80	180	1	1	9	6	430 00	114 00
Dryden	Lapeere	171	2,000	1,125 00	65 00	31 66	1,283 99	154	200	1	2	10	15	650 00	475 00
Dundas	Monroe	437	20,000	2,756 25	80 00	31 56	3,965 74	324	200	1	7	10	63	800 00	1,966 25
Durand	Shawasee	177	7,000	785 00	52 50	26 00	1,172 11	138	200	1	2	10	10	325 00	260 00
East Jordan	Charlevoix	286	7,500	1,265 00	55 55	28 33	8,268 15	215	179	1	3	9	27	500 00	765 00
Eastlake	Manistee	435	4,000	1,650 00	75 00	45 00	2,216 47	267	200	1	2	10	30	750 00	900 00
East Saginaw	Saginaw	9,384	235,949	54,570 46	90 88	43 23	105,225 31	4,827	200	13	101	130	1,010	10,300 00	42,670 49
East Tawas	Iosco	611	5,600	3,410 00	95 00	35 14	4,891 86	492	200	1	7	10	70	950 00	2,460 00
Eaton Rapids	Eaton	589	25,000	4,848 00	90 00	31 92	9,636 75	462	197	1	11	10	106	900 00	3,445 00
Exmore	Wayne	235	5,000	910 00	59 66	30 72	2,988 15	163	180	1	3	9	18	537 00	373 00
Edmore	Montcalm	242	2,500	1,500 00	60 00	30 00	1,826 60	210	196	1	8	10	30	600 00	900 00
Edwardsburg	Cass	142	3,000	1,144 75	60 41	28 61	1,505 72	127	180	2	3	9	21	548 75	601 00
Elk Rapids	Antrim	405	27,000	4,235 00	130 00	41 11	6,242 99	339	180	1	3	10	76	1,200 00	3,125 00
Elm Hall	Grand	112	2,000	632 00	50 00	28 00	767 85	89	178	1	1	8	9	400 00	253 00
Elmira	Osego	149	1,500	765 00	55 00	30 00	1,058 75	106	175	1	1	9	9	495 00	270 00

GRADED SCHOOL STATISTICS.

Elide	100	2,000	1,317	6,500	180	66	37	46	1,794	91	300	174	1	1	3	1	1	9	0	37	1	900	00	747	00
Elk	2,086	50,000	6,500	1,497	60	66	47	27	19,848	41	101	181	1	1	11	1	1	10	110	1	900	00	5,250	00	
Elk	5,536	7,000	1,497	60	70	80	90	198	8,098	08	230	198	1	1	3	1	1	10	80	1	700	00	1,197	00	
Elk	454	5,500	3,044	105	00	33	66	1,000	5,073	43	402	198	1	1	1	1	1	10	61	1	1,000	00	1,194	43	
Elk	225	6,000	720	61	50	80	80	1,312	45	105	180	1	1	1	1	1	1	10	9	1	450	00	270	00	
Elk	130	6,000	1,040	70	00	33	66	2,155	57	8,415	00	105	1	1	1	1	1	10	15	1	700	00	340	00	
Elk	242	4,700	1,485	70	00	33	66	2,771	15	450	00	178	1	1	1	1	1	10	25	1	630	00	905	00	
Elk	110	4,700	1,485	70	00	33	66	1,238	60	1,320	00	178	1	1	1	1	1	10	10	1	630	00	850	00	
Elk	540	50,000	5,800	80	00	33	66	10,630	20	1,320	00	526	2	2	11	2	2	110	110	1	1,900	00	4,000	00	
Elk	204	1,800	623	25	80	00	22	743	14	147	180	1	1	1	1	1	1	9	9	1	390	00	263	25	
Elk	215	1,000	891	00	50	00	25	1,186	05	190	200	1	1	1	1	1	1	8	19	1	400	00	491	00	
Elk	123	4,000	765	00	50	00	33	963	57	190	200	1	1	1	1	1	1	8	19	1	400	00	315	00	
Elk	324	2,500	765	00	50	00	33	1,066	50	190	200	1	1	1	1	1	1	9	6	1	450	00	210	00	
Elk	170	1,000	498	00	33	00	22	587	28	175	180	1	1	1	1	1	1	10	9	1	297	00	198	00	
Elk	156	875	464	00	33	00	22	577	90	117	180	1	1	1	1	1	1	16	16	1	390	00	464	00	
Elk	151	2,000	498	00	33	00	22	600	00	114	180	1	1	1	1	1	1	9	9	1	815	00	190	00	
Elk	111	1,200	353	00	20	00	20	523	21	72	200	1	1	1	1	1	1	12	12	1	358	00	358	00	
Elk	235	13,000	1,327	33	77	75	27	3,132	78	147	200	1	1	1	1	1	1	10	20	1	777	33	550	00	
Elk	2,718	135,000	17,015	75	97	70	38	37,036	44	51,840	00	186	2	2	87	30	370	30	370	1	2,831	00	14,084	75	
Elk	280	8,000	2,060	00	57	50	30	2,638	24	250	200	1	1	1	1	1	1	20	20	1	1,150	00	900	00	
Elk	194	3,000	900	00	45	00	45	1,491	38	1,000	00	108	2	2	2	2	2	20	20	1	346	00	225	00	
Elk	186	3,600	571	00	38	40	25	1,553	70	800	00	180													

TABLE XVIII—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days' school.	No. of teachers employed.		Aggregate No. of months taught by all the teachers.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.		
Gratwick	Allegan	187	\$2,650	\$700 00	\$35 00	\$35 00	\$807 53	\$7 47	152	200	2	2	9	20	\$327 50	\$700 00
Grand Blanc	Ganewsee	100	2,000	652 50	\$37 50	\$35 00	719 64	87 47	74	180	2	2	9	20	\$327 50	\$700 00
Grand Haven	Allegan	1,916	50,000	10,694 00	73 38	38 08	19,190 30	19,190 30	1,302	196	3	23	30	223	2,300 00	8,415 00
Grand Junction	Van Buren	127	4,000	1,681 00	73 38	38 08	1,982 73	1,582 50	86	180	1	1	18	18	777 84	1,631 00
Grand Lodge No. 9	Allegan	250	10,000	1,827 84	77 78	35 16	4,149 13	6,000 00	235	200	1	2	10	30	777 84	1,050 00
Grand Lodge No. 11	Allegan	283	8,000	1,385 00	60 00	35 50	8,753 58	2,000 00	211	105	1	2	10	30	600 00	705 00
Grand Rapids City	Kent	16,547	710,000	122,892 90	153 50	74 74	221,589 47	211,000 00	10,752	2,200	7	220	70	2,200	10,752 00	111,612 00
Grand Rapids No. 1	Kent	181	28,000	3,589 75	104 87	31 10	22,842 70	30,000 00	107	300	1	1	10	30	1,048 75	2,401 00
Grand Rapids No. 2	Kent	130	4,000	1,099 50	45 00	38 08	2,901 50	485	150	150	1	1	9	9	465 00	465 00
Grand Rapids No. 3	Kent	400	2,500	1,439 50	40 00	34 65	1,878 20	314	200	1	3	10	30	400 00	1,039 50	
Grand Rapids No. 4	Kent	610	7,000	1,771 25	75 00	35 81	8,059 71	4,950 00	320	200	1	4	10	30	750 00	1,021 25
Grand Rapids No. 5	Kent	229	10,000	1,827 45	70 00	32 74	3,518 08	310	200	1	1	4	10	34	700 00	1,127 45
Grand Rapids No. 6	Kent	158	9,000	2,186 60	60 00	37 06	3,115 30	98 70	180	200	1	1	10	43	800 00	1,286 00
Grand Rapids No. 7	Kent	386	2,000	625 00	47 70	32 50	738 50	188	150	1	1	1	9	6	430 00	136 00
Grand Rapids No. 8	Kent	340	8,000	2,450 00	90 00	35 75	7,348 50	2,660 00	275	197	1	4	10	40	900 00	1,550 00
Greenland	Ontonagon	54	500	1,050 00	70 00	35 00	1,273 80	48	200	1	2	10	10	700 00	350 00	
Greenville	Montcalm	937	43,000	8,846 00	82 50	38 38	13,294 71	784	200	2	17	20	170	1,650 00	6,060 00	
Grindstone City	Huron	309	2,500	1,800 00	70 00	30 00	1,848 22	536 00	198	197	1	2	10	20	700 00	600 00
Grosse Ile	Wayne	206	2,000	1,400 00	55 00	28 50	1,572 14	110	200	1	4	10	30	550 00	850 00	
Hadley	Lapeer	101	2,000	1,000 00	60 00	30 50	1,504 88	122	196	1	2	10	17	600 00	400 00	
Hamilton	Allegan	104	1,800	540 00	40 00	20 00	722 88	106	180	1	1	1	9	300 00	180 00	
Hamtramck	Wayne	422	3,700	1,148 75	44 38	39 40	8,656 25	2,650 00	208	200	2	1	17	10	784 75	884 00
Hancock	Houghton	1,127	30,000	6,300 00	150 00	43 00	19,019 19	10,000 00	519	200	2	10	100	1,500 00	4,800 00	
Hanover	Jackson	168	8,000	1,650 00	55 30	36 46	2,822 04	136	186	2	2	19	19	1,050 00	600 00	
Harbor Springs	Emmet	315	5,000	1,352 00	72 20	32 66	1,973 91	2,126 41	227	180	1	3	9	27	650 00	832 00
Harrison	Clare	208	8,500	1,650 00	41 25	35 17	1,855 17	300	200	2	4	40	40	1,650 00	1,650 00	
Hartsville	Alcona	274	4,000	1,220 00	49 10	35 00	1,541 51	650 00	236	180	2	2	12	18	580 00	630 00
Hart	Oceana	241	3,000	1,745 00	71 70	29 80	2,128 48	220	178	1	1	4	9	35	700 00	1,045 00
Hartford	Van Buren	332	4,000	2,240 00	88 80	32 00	2,970 27	900	180	1	5	9	45	1,440 00	1,440 00	
Hastings	Barry	822	40,000	5,040 00	70 00	30 30	10,866 82	11,500 00	441	196	2	12	20	1,400 00	3,540 00	
Hawey	Oscoda	156	3,500	1,800 00	70 00	30 00	2,046 80	37 50	162	186	1	2	10	20	700 00	600 00
Heperia	Newaygo	282	4,000	1,520 00	49 40	35 00	1,811 35	1,811 35	235	180	3	2	13	18	880 00	680 00
Hillman	Oakland	134	1,500	710 00	45 00	26 00	805 80	1,321 00	132	196	1	1	10	10	450 00	290 00
Hillman	Hillman	165	4,450	1,204 50	87 70	29 60	1,912 10	1,485 00	186	204	3	3	17	19	641 00	543 50
Hilledale City	Montgomery	1,116	51,000	7,558 15	85 10	29 95	15,731 57	7,000 00	388	196	5	14	43	133	3,574 50	3,893 63

GRADED SCHOOL STATISTICS.

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TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for superintendence and instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days' school.	No. of teachers employed.		Aggregate No. of months taught by all the teachers.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.	Men.	Women.	Men.	Women.
Lawrence ..	Van Buren ..	196	\$8,000	\$1,542 00	\$33 83	\$46 00	\$1,789 97	---	186	177	1	3	9	27	\$300 00	1,242 00
Lawton ..	Van Buren ..	230	12,000	1,490 50	66 66	23 43	2,042 54	---	252	190	1	4	9	38	606 00	880 50
Leellie ..	Ingham ..	361	8,000	2,960 00	90 10	33 30	3,075 00	---	232	200	1	6	10	50	900 00	1,660 00
Lexington ..	Sanilac ..	276	3,000	1,580 00	65 00	23 25	1,961 61	---	225	200	1	4	10	40	650 00	980 00
Leroy ..	Oscoda ..	225	4,000	1,085 00	50 00	32 50	3,564 42	\$4,100 00	175	180	1	2	9	18	450 00	535 00
Linden ..	Genesee ..	168	5,000	1,000 00	60 00	25 00	1,867 22	---	153	200	1	2	10	20	500 00	500 00
Lisbon ..	Ottawa ..	107	1,300	810 00	60 00	30 00	1,008 63	---	76	180	1	1	9	9	540 00	270 00
Litchfield ..	Hillsdale ..	170	10,000	1,521 00	70 00	33 00	11,262 68	7,300 00	150	175	1	4	9	27	630 00	891 00
Lowell ..	Kent ..	677	4,000	3,695 55	70 00	30 29	6,992 80	900 00	551	185	1	11	10	99	700 00	2,999 55
Ludington ..	Mason ..	2,399	75,000	15,945 75	97 50	42 40	80,894 86	43,927 00	2,082	195	2	38	20	330	1,950 00	13,983 75
Luther ..	Lake ..	408	6,500	2,700 00	80 00	38 00	5,068 57	800 00	236	198	1	5	10	50	800 00	1,900 00
Lyons ..	Ionia ..	199	2,500	1,565 00	72 22	34 00	1,897 55	---	87	180	1	3	9	27	650 00	918 00
Mackinac ..	Cheboygan ..	127	3,000	789 25	47 22	34 42	853 00	370 00	91	175	1	1	9	10	425 00	344 25
McBride ..	Montcalm ..	164	2,000	1,150 00	55 00	30 00	1,430 38	---	174	198	1	2	10	20	550 00	600 00
Mackinac Island ..	Mackinac ..	160	3,000	900 00	60 00	30 00	1,243 18	---	152	157	1	2	7	16	420 00	480 00
Mancelona ..	Antrim ..	447	4,000	2,250 00	80 00	28 35	8,796 04	1,500 00	422	190	1	7	9	54	720 00	1,530 00
Manchester ..	Washtenaw ..	415	25,000	3,230 00	95 00	32 57	4,504 70	---	387	200	1	7	10	70	950 00	2,280 00
Manistee ..	Manistee ..	4,148	100,000	21,792 85	78 95	88 65	55,619 41	24,000 00	2,150	197	5	45	50	450	3,947 50	17,845 35
Manistique ..	Schoolcraft ..	371	6,000	4,000 00	100 00	50 00	5,025 85	---	246	190	1	6	10	60	1,000 00	3,000 00
Manton ..	Wexford ..	254	11,000	608 25	74 62	33 86	3,968 38	7,450 00	258	200	1	4	10	40	746 25	1,354 50
Maple Rapids ..	Clinton ..	200	3,000	1,860 00	50 00	28 66	1,643 90	---	190	200	1	3	10	30	500 00	880 00
Marcellus ..	Cass ..	236	7,500	1,410 00	45 00	33 38	2,251 45	900 00	285	177	2	2	18	18	810 00	600 00
Marion City ..	St. Clair ..	998	18,000	3,618 75	100 00	80 54	10,896 68	3,600 00	515	190	1	11	9	88	900 00	2,718 75
Marion ..	Oscoda ..	177	3,500	627 00	75 00	32 70	3,680 02	8,000 00	140	140	1	2	4	10	300 00	327 00
Marquette ..	Sanilac ..	256	4,000	1,600 00	70 00	30 00	2,065 90	---	163	200	1	3	10	30	700 00	900 00
Marquette ..	Marquette ..	2,555	94,000	13,170 00	62 50	54 18	84,572 28	45,779 25	1,431	195	2	22	20	220	1,250 00	11,920 00
Marshall ..	Alcona ..	1,144	100,000	9,851 48	95 00	35 00	13,639 88	---	774	196	3	20	30	20	2,850 00	7,001 48
Martin ..	Allegan ..	129	5,000	1,214 50	70 00	32 47	2,196 84	3,000 00	118	180	1	3	9	18	680 00	584 50
Marysville ..	St. Clair ..	189	2,500	680 00	85 00	37 00	752 21	66 39	110	176	1	2	10	18	---	630 00
Mason ..	Ingham ..	508	18,000	4,680 00	120 00	37 98	8,152 22	---	528	195	1	10	10	92	1,200 00	3,490 00
Mattawan ..	Van Buren ..	95	3,000	457 50	45 00	31 25	656 15	---	87	190	1	1	6	6	270 00	137 50
May ..	Tuscola ..	240	8,000	1,200 00	39 37	23 75	2,108 06	7,487 00	178	200	2	8	16	24	630 00	570 00
Mearns ..	Oceana ..	116	1,400	570 00	57 00	31 66	842 19	150 00	106	180	2	2	18	18	765 00	570 00
Meosta ..	Macosta ..	168	8,000	1,048 00	42 50	30 00	1,261 40	---	110	180	2	1	18	9	---	270 00
Memphis ..	Macomb ..	261	4,000	1,200 00	60 00	30 00	2,453 91	---	165	200	1	2	10	20	600 00	600 00

GRADED SCHOOL STATISTICS.

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London	210	12,000	2,135	90	05	25	18	14	2,545	184	2345	180	8	0	14	31	913	25	1,215	55
Manitowish	2,704	3,800	14,000	40	40	40	40	40	21,044	93	1,078	130	1	26	10	260	1,320	00	12,460	00
Marquette	187	3,800	1,940	40	40	40	40	40	1,044	93	1,078	130	1	26	10	260	1,320	00	12,460	00
Marquette	140	3,800	1,940	40	40	40	40	40	1,044	93	1,078	130	1	26	10	260	1,320	00	12,460	00
Marquette	380	5,000	1,170	00	60	00	35	00	1,395	73	136	197	1	4	10	40	900	00	1,780	00
Marquette	235	8,000	2,000	00	80	00	30	00	2,467	21	2,467	21	1	4	10	40	900	00	1,780	00
Middleville	668	8,800	6,250	00	110	00	37	72	9,653	58	445	185	1	11	10	110	1,100	00	4,150	00
Midland (No. 6)	185	2,000	1,600	00	45	00	80	00	840	31	104	137	1	1	8	8	800	00	240	00
Midland	257	2,800	1,631	25	66	00	35	15	2,415	97	282	177	1	6	9	41	600	00	1,081	25
Milford	353	16,000	2,590	00	95	00	37	53	4,304	73	297	186	1	6	10	60	950	00	1,640	00
Milford	97	2,500	690	00	60	00	25	00	768	71	74	160	1	1	7	8	430	00	200	00
Millburg	198	6,500	1,899	75	65	00	23	99	2,532	28	163	200	1	3	10	30	650	00	719	75
Millington	171	1,500	750	00	39	47	63	92	927	63	160	200	2	7	19	30	750	00	719	75
Minden City	2,009	3,921	3,921	88	65	00	37	99	5,353	73	679	197	2	7	20	69	1,300	00	2,621	88
Monroe	2,052	37,000	6,616	25	80	00	37	60	9,457	46	679	197	2	13	23	127	1,340	00	4,776	25
Monroe	342	12,000	2,446	00	77	77	83	53	3,085	76	278	178	1	6	9	54	700	00	1,746	00
Morenci	143	1,000	1,200	00	70	00	32	50	2,305	70	278	178	1	2	10	20	700	00	560	00
Morice	225	1,800	1,250	00	60	00	32	50	2,305	70	278	178	1	2	10	20	700	00	560	00
Morice	65	1,000	1,200	00	70	00	32	50	2,305	70	278	178	1	2	10	20	700	00	560	00
Moscow	1,590	40,000	6,121	00	130	00	33	25	12,164	59	798	198	1	16	10	148	1,200	00	4,921	00
Mt. Clemens	154	2,000	725	00	47	50	47	50	644	34	100	200	1	1	10	10	475	00	250	00
Mt. Morris	902	25,000	4,789	00	100	00	36	08	13,592	59	451	200	1	14	10	105	1,000	00	3,798	00
Maubell	202	7,200	1,388	00	66	00	37	33	1,375	42	202	190	1	3	9	27	600	00	738	00
Muir	8,051	275,000	48,618	00	103	75	44	79	156,077	40	5,171	196	8	90	80	900	8,300	00	40,313	08
Muskegon	106	5,000	1,200	00	60	00	31	57	1,411	77	70	190	1	2	10	19	600	00	600	00
Napoleon	318	12,000	2,505	00	86	00	30	46	5,098	33	296	200	1	6	10	54	880	00	1,645	00
Nashville	251	2,000	1,550	00	70	00	45	00	2,616	27	165	196	2	1	20	10	1,400	00	450	00
National Mine	1,780	48,000	9,731	25	180	00	45	06	20,992	61	1,010	198	1	20	10	176	1,800	00	7,981	25
Negaunee	456	5,500	2,680	00	90	00	35	60	3,665	26	301	198	1	5	10	50	1,800	00	1,780	00
Newaygo	296	22,000	1,160	00	60	00	28	00	1,900	35	123	197	1	2	10	20	600	00	560	00
New Baltimore	128	2,500	525	00	36	00	20	62	571	50	84	200	1	1	10	8	360	00	105	00
New Boston	197	4,000	1,198	60	75	00	45	00	1,597	50	157	190	1	5	10	20	750	00	1,198	60
New Buffalo	278	5,500	1,650	00	75	00	45	00	2,300	48	235	200	1	2	10	20	500	00	900	00
Newberry	222	1,800	1,013	00	55	55	35	50	1,281	33	138	190	1	2	10	15	500	00	513	00
New Haven	199	1,000	680	00	50	00	15	00	940	22	130	200	1	1	10	10	500	00	130	00
New Holland	62	4,000	525	00	45	00	20	00	608	86	50	190	1	1	9	6	405	00	120	00
New Hudson	125	4,000	690	00	55	00	25	00	901	43	108	200	1	1	8	10	440	00	250	00
New Troy	1,223	27,000	9,811	25	131	57	41	49	13,431	05	942	190	2	15	19	161	2,500	00	6,681	25
Niles	168	10,000	1,546	00	53	38	32	00	2,087	35	124	190	2	8	18	13	970	00	578	00
North Adams	267	10,000	1,546	00	53	38	32	00	2,087	35	124	190	2	8	18	13	970	00	578	00
North Branch	461	12,000	4,130	00	90	76	42	14	9,595	30	325	200	2	7	13	70	1,180	00	1,300	00
North Muskegon	220	2,000	1,070	00	55	00	25	00	1,597	50	157	190	1	5	10	20	750	00	1,198	60
Northport	404	20,000	2,780	00	85	00	36	78	5,917	66	840	200	1	7	10	70	1,000	00	1,880	00
Northville	5,000	5,000	4,250	00	100	00	46	42	6,516	83	577	200	1	7	10	70	1,000	00	3,250	00
Norway	130	3,000	675	00	50	00	25	00	853	40	93	178	1	1	9	9	450	00	225	00
Nunica	253	1,800	610	00	30	00	30	00	1,083	62	146	200	1	2	10	20	500	00	600	00
Oakdale	253	1,800	610	00	30	00	30	00	1,083	62	146	200	1	2	10	20	500	00	600	00

TABLE XVIII.—Continued.

Diatriota.	Counties.	No. of children between 5 and 10 years.	Estimated valuation of school property.	Amount paid for instruction, per diem and maintenance.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days school.	No. of teachers employed.		Aggregate No. of months taught by all the teachers.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.			Men.	Women.
Oakley	Saginaw	101	\$1,000	507 00	\$43 50	\$20 87	\$637 13	\$50 00	58	170	2	2	8	8	\$840 00	\$167 00
Okeanos	Ingham	166	3,500	730 00	45 00	25 00	908 60		121	180	1	2	13	13	405 00	\$225 00
Olivet	Easton	250	7,000	1,354 70	66 66	29 06	2,974 64	1,600 00	205	185	1	4	27	27	600 00	784 70
Onetaka	Manistee	200	2,000	1,080 00	40 00	20 00	1,694 54	400 00	154	180	1	2	9	18	390 00	720 00
Onondaga	Ingham	124	1,000	611 25	47 91	40 00	799 16		92	180	1	1	9	9	481 25	180 00
Ontonagon	Ontonagon	373	5,000	3,600 00	90 00	42 55	5,699 79		276	197	2	5	20	47	1,600 00	2,000 00
Opechee	Houghton	924	5,250 00	78 33	41 40		8,170 26		565	200	8	8	39	70	2,850 00	2,900 00
Orion	Oakland	168	3,000	1,120 00	60 00	26 00	1,366 55		149	197	1	2	10	20	600 00	530 00
Ortonville	Oakland	111	8,000	695 00	47 50	22 00	817 44		102	184	2	1	10	10	475 00	220 00
Oscoda	Iosco	1,014	9,000	4,500 50	50 31	36 31	10,059 74	4,020 96	400	200		12	96		3,450 50	
Ossau	Hillsdale	99	3,500	510 00	41 25	30 00	643 92		85	180	1	1	8	9	330 00	180 00
Ottisville	Genesee	184	2,000	880 00	45 00	23 00	1,247 50	107 50	144	200	1	2	10	20	450 00	440 00
Ozgo	Allegan	477	10,000	2,800 00	111 11	35 00	4,596 15		391	180	1	9	54	54	1,000 00	1,900 00
Otter Lake	Alcona	141	1,200	673 00	53 77	27 35	774 35	27 31	137	180	1	1	9	9	475 00	198 00
Overisel	Allegan	139	2,000	554 00	29 00	20 00	632 78		104	200	2	2	17	17		504 00
Ovid	Clinton	400	20,000	3,236 00	100 00	31 94	5,532 91	1,000 00	371	200	1	9	10	10	1,000 00	2,235 00
Owosso	Shiawassee	1,207	54,000	12,077 00	90 00	40 78	22,136 51	4,000 00	1,432	185	8	23	30	330	2,700 00	9,377 00
Oxford	Oakland	243	1,400	2,150 00	70 00	29 00	5,215 04		90	177	1	5	10	50	700 00	1,450 00
Palmira	Lebanese	133	8,000	725 00	55 55	26 00	911 79		70	200	1	1	9	9	500 00	225 00
Palo	Lebanese	95	4,000	1,068 00	55 00	26 30	1,255 23		70	200	1	2	10	17	550 00	456 00
Paris	Macata	91	1,200	790 00	50 00	30 00	645 12		85	190	1	1	9	9	450 00	270 00
Paris, Tp. No. 1	Kent	131	1,000	615 00	50 00	31 80	987 66	453 56	104	175	1	1	9	9	450 00	195 00
Parma	Jackson	191	15,000	1,758 00	70 00	32 00	2,746 08		185	200	1	4	10	33	700 00	1,065 00
Paw Paw	San Benito	348	40,000	3,380 00	100 00	36 00	5,967 75		140	196	1	9	10	80	1,000 00	2,890 00
Peck	Sanilac	138	800	600 00	40 00	30 00	664 13		141	200	1	1	10	10	400 00	300 00
Pentwater	Oscoda	453	14,000	2,682 50	90 00	35 77	5,432 39		398	200	1	1	10	50	900 00	1,782 50
Pennington	Baraga	140	1,200	1,320 00	50 00	30 00	1,499 70	11 67	94	195	1	1	10	10	330 00	400 00
Perrinton	Gratiot	115	1,500	680 00	50 00	26 00	1,017 30	1,477 50	113	176	1	1	9	9	450 00	180 00
Perry	Shiawassee	178	1,800	1,201 00	47 50	18 50	1,707 68		140	200	2	2	20	13	960 00	851 00
Petokey	Emmet	863	17,000	5,155 00	113 50	33 50	16,947 91	15,000 00	587	200	1	12	10	130	1,135 00	4,090 00
Petersburg	Monroe	196	9,000	1,105 00	49 44	26 60	1,581 97		160	190	1	8	9	27	445 00	730 00
Pewamo	Ionia	115	1,600	1,045 00	52 77	30 00	1,301 65		112	190	1	2	9	19	475 00	570 00
Pine Run	Genesee	67	800	876 00	43 00	34 13	819 41		63	180	1	1	9	9	405 00	270 00
Piercen	Montcalm	164	2,000	675 00	45 00	28 00	812 92		143	190	1	1	9	9	405 00	270 00
Pinekey	Livingston	199	6,000	1,500 00	50 00	28 00	2,377 84	6,000 00	179	200	2	2	20	20	1,000 00	560 00

TABLE XVIII.—Continued.

Districts.	Counties.	No. of children between 5 and 20 years.	Estimated valuation of school property.	Amount paid for instruction.	Average monthly wages of teachers.		Total expenditures.	Total indebtedness.	No. of children that attended school during the year.	No. of days of school.	No. of teachers employed.		Aggregate No. of months taught by all the teachers.		Total wages of teachers for the year.	
					Men.	Women.					Men.	Women.			Men.	Women.
Schoolcraft.....	Kalamazoo.....	246	\$24,000	\$2,692 00	\$111 00	\$37 60	\$3,478 32		200	180	1	5	9	45	\$1,000 00	\$1,692 00
Sebewaing.....	Huron.....	366	3,000	835 00	53 00	28 50	940 34		104	200	1	1	10	10	550 00	285 00
Shafterburg.....	Shiawassee.....	78	2,000	589 00	40 44	25 00	886 37		64	178	2	1	9	9	384 00	225 00
Shelly.....	Ocean.....	344	6,000	1,733 25	44 40	31 45	4,319 71	\$1,800 00	808	177	1	4	9	38	600 00	1,133 25
Shepherd.....	Isabella.....	196	2,000	984 00	43 80	34 00	1,067 59		163	160	2	4	8	18	380 00	544 00
Sheridan.....	Montcalm.....	161	2,000	1,170 00	60 00	35 00	1,417 07		115	180	1	2	9	18	540 00	680 00
Sherwood.....	Branch.....	152	3,000	866 00	50 00	26 00	1,062 25		124	178	1	2	9	16	450 00	416 00
Smyrna.....	Ionia.....	96	1,200	670 00	44 40	30 00	886 00		71	180	1	1	9	9	400 00	270 00
South Frankfort.....	Benzie.....	156	6,000	1,200 00	55 00	32 50	2,140 07	540 00	113	200	1	2	10	20	550 00	660 00
South Haven.....	Van Buren.....	535	17,000	3,092 46	100 00	30 87	5,516 88	10,000 00	510	190	1	8	9	71	900 00	2,192 46
South Lyon.....	Oakland.....	219	4,000	1,384 00	77 70	24 40	1,885 14	1,400 00	152	188	1	3	9	28	700 00	884 00
Sparta Center.....	Kent.....	278	4,000	1,780 00	80 00	32 80	2,133 59		245	200	1	8	10	30	800 00	960 00
Spring Lake.....	Ottawa.....	596	8,000	3,374 50	88 80	33 86	4,206 10	25 00	535	185	1	9	9	78	800 00	2,574 50
Springport.....	Jackson.....	123	3,000	1,400 00	70 00	35 00	1,672 98		152	200	1	2	10	20	700 00	700 00
Springwells, Tp. 1.....	Wayne.....	450	9,000	1,185 00	65 00	28 61	2,283 52	5,500 00	128	200	1	2	10	18	650 00	535 00
Springwells, Tp. 2.....	Wayne.....	496	15,000	1,450 00	65 00	40 00	12,313 16	85,000 00	274	196	1	2	10	20	650 00	800 00
Springwells, Tp. 4.....	Wayne.....	667	8,000	4,040 00	50 00	30 00	2,583 62	3,000 00	150	200	1	2	10	18	500 00	540 00
Springwells, Tp. 7.....	Wayne.....	330	3,000	900 00	50 00	25 00	1,115 91	1,000 00	180	185	1	1	10	10	650 00	250 00
Stambaugh.....	Iron.....	218	3,000	1,150 00	70 00	45 00	2,241 65		149	200	1	1	10	10	700 00	450 00
Standish.....	Arenac.....	328	2,500	880 00	50 00	35 00	1,862 10		241	200	1	1	10	10	500 00	350 00
Stanwood.....	Macosta.....	124	1,500	567 00		31 50	1,046 47	800 00	96	180		3	18			567 00
Stanton.....	Montcalm.....	520	10,000	4,070 00		39 10	5,301 66		483	200		10	100			3,910 00
Stockbridge.....	Ingham.....	162	4,500	1,110 00	55 00	28 00	1,677 13	3,500 00	160	200	1	2	10	20	550 00	560 00
Stephenson.....	Menominee.....	261	2,500	1,450 00	70 00	37 50	2,406 41	1,375 00	188	196	1	2	10	20	700 00	210 00
Stevensville.....	Berrien.....	181	3,500	510 00	50 00	30 00	861 16	2,500 00	106	140	1	1	6	7	300 00	
Sturgis.....	St. Joseph.....	614	40,000	4,398 00	122 20	34 70	5,966 66		434	190	1	10	9	95	1,100 00	3,298 00
Summit City.....	G'd Travers.....	86	1,000	380 00		34 50	400 24		79	140		3	11			380 00
Summer.....	Gratiot.....	110	4,000	770 88	50 00	24 68	970 53		110	180	1	3	9	13	450 00	320 83
Sutton's Bay.....	Leelanau.....	200	5,000	860 00	50 00	35 00	1,189 88		180	200	1	1	10	10	500 00	350 00
Tawas City.....	Iosco.....	573	3,500	2,800 00	80 00	40 00	4,120 62	1,650 00	283	200	1	5	10	50	800 00	2,000 00
Tecumseh.....	Lenawee.....	581	48,000	5,265 00	92 80	31 40	9,152 19	660 00	471	196	2	13	14	126	1,300 00	3,965 00
Tekonsha.....	Calhoun.....	186	10,000	1,227 00	60 00	28 60	1,946 49	60 00	207	175	1	4	9	24	500 00	687 00
Thornville.....	Lapeer.....	91	1,500	585 00	50 00	26 11	662 05		75	180	1	1	7	9	350 00	235 00
Three Oaks.....	Berrien.....	386	5,000	1,720 00	75 00	35 00	2,277 58		275	160	1	4	8	32	600 00	1,120 00
Three Rivers.....	St. Joseph.....	830	10,000	7,317 00	114 40	31 40	22,063 18	4,500 00	762	200	2	17	18	148	2,060 00	5,257 00

GRADED SCHOOL STATISTICS.

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Traverse City	(41. Traverse	40,000	9,397 50	108 00	45 14	20,869 93	13,000 00	476	180	1	20	9	171	1,800 00	7,927 50
Tranton	Wayne	3,000	1,400 00	65 00	35 00	1,915 93	13,000 00	254	100	1	3	10	10	650 00	600 00
Tranton	Wayne	1,000	600 00	35 00	35 00	1,325 34	13,000 00	140	100	1	3	10	10	650 00	600 00
Tuscola	Tuscola	1,800	660 00	50 00	35 00	1,325 34	13,000 00	130	180	3	1	9	8	500 00	250 00
Tuscola	Tuscola	1,300	750 00	50 00	35 00	1,325 34	13,000 00	79	200	3	1	9	10	500 00	250 00
Ubley	Huron	2,300	667 50	43 75	34 00	1,097 32	1,300 00	123	200	1	1	10	10	437 50	240 00
Union City	Branch	25,000	4,135 00	100 00	34 70	5,316 10	1,300 00	847	200	1	9	10	90	1,000 00	9,125 00
Union City	Tuscola	3,500	1,000 00	50 00	35 00	1,490 69	1,300 00	145	200	1	3	10	30	500 00	500 00
Utica	Macomb	12,500	2,190 00	62 50	31 33	3,860 94	719 94	229	200	2	3	10	30	1,500 00	940 00
Vandalia	Case	5,000	1,440 00	65 00	31 60	1,771 35	1,300 00	183	177	1	3	9	37	585 00	835 00
Vanderbilt	Ozago	2,000	765 00	50 00	35 00	927 23	1,300 00	98	180	1	1	9	9	450 00	315 00
Vassar	Tuscola	24,000	3,795 50	110 00	32 47	5,995 14	1,300 00	504	195	1	9	10	83	1,100 00	2,065 50
Vermontville	Eaton	235	1,651 00	80 55	34 29	2,508 06	1,300 00	243	178	2	4	9	27	735 00	928 50
Vernon	Shiawassee	1,997	1,550 00	60 40	30 30	1,968 62	1,300 00	181	200	2	5	12	27	735 00	825 00
Vicksburg	Kalamazoo	7,300	2,259 00	80 00	34 30	3,062 99	1,300 00	259	180	1	7	9	45	720 00	1,359 00
Vriesland	Ottawa	2,600	680 00	88 00	25 00	1,212 19	75 00	107	200	1	1	9	10	380 00	250 00
Wadon	Menominee	3,000	1,700 00	75 00	47 75	2,187 16	75 00	185	190	1	3	10	20	750 00	960 00
Wadon	Wadon	1,200	650 00	42 20	30 00	768 08	1,300 00	71	180	1	1	9	9	380 00	270 00
Wadon	Hilledale	144	500 00	45 00	25 00	742 38	1,300 00	136	157	1	1	8	8	380 00	200 00
Walker Tp. No. 14	Kent	234	600 00	50 00	30 00	1,408 61	1,300 00	150	136	1	2	20	20	380 00	600 00
Walker Tp. No. 11	Kent	3,200	480 00	40 00	20 00	1,216 88	1,300 00	112	160	1	1	8	8	330 00	160 00
Warren	Macomb	2,200	600 00	55 50	20 00	945 72	1,300 00	98	178	1	1	9	5	508 00	100 00
Washington	Macomb	1,500	747 50	48 90	30 87	888 36	1,300 00	86	200	2	2	10	10	480 00	308 75
Watervliet	Berrien	3,225	1,025 00	55 50	30 80	4,417 75	5,000 00	157	180	1	2	9	17	500 00	535 00
Watervliet	Tuscola	3,500	612 00	50 00	30 00	1,474 44	2,018 00	84	180	1	1	9	6	450 00	180 00
Wayland	Allegan	4,000	1,185 00	66 80	21 60	1,464 44	1,300 00	142	180	1	3	9	27	600 00	535 00
Wayne	Wayne	20,000	2,387 50	73 75	32 00	4,112 02	2,000 00	318	200	3	5	10	50	1,000 00	1,000 00
Webberville	Wayne	2,400	580 00	50 00	24 50	1,143 86	1,300 00	135	175	1	2	9	18	437 50	441 00
West Bay City	Bay	4,850	21,114 50	79 75	38 30	36,380 42	77,000 00	2,837	196	4	47	40	470	3,150 00	17,864 00
West Branch	Ogemaw	6,600	1,875 00	94 40	38 00	3,071 36	6,000 00	384	180	1	3	9	27	850 00	1,025 00
Wheeler	Gratiot	1,200	476 00	29 70	30 25	1,399 35	475 00	97	160	1	2	20	16	500 00	476 00
White Cloud	Newaygo	5,000	1,400 00	50 00	37 90	5,718 82	55 19	154	200	1	3	10	30	500 00	900 00
Whitehall	Muskegon	30,000	4,085 00	100 00	37 90	5,718 82	1,000 00	504	200	1	10	10	80	1,000 00	3,035 00
White Pigeon	St. Joseph	285	2,800 00	120 00	32 00	3,786 03	500 00	232	200	1	5	10	50	1,200 00	1,900 00
Williamston	Ingham	20,000	2,525 60	55 70	30 25	4,400 54	500 00	310	200	2	7	16	54	882 00	1,538 60
Woodland	Barry	3,500	750 00	37 70	27 50	978 53	500 00	101	200	2	20	20	20	750 00	1,002 50
Worth	Arnos	188	471 75	37 13	27 50	712 49	1,000 00	90	168	1	1	9	5	334 25	137 50
Wyandotte	Wayne	50,000	4,570 00	110 00	38 50	7,918 40	1,000 00	508	188	1	10	10	90	1,100 00	3,470 00
Yale	St. Clair	380	1,560 00	50 00	28 50	2,607 40	7,235 00	240	198	1	4	10	40	4,715 00	1,990 00
Ypsilanti	Washtenaw	1,764	11,204 00	94 30	49 98	20,043 65	500 00	640	200	5	17	50	170	4,715 00	8,467 00
Zeeland	Ottawa	5,000	1,582 50	58 00	25 06	2,268 92	1,300 00	324	200	1	4	10	40	580 00	1,002 50
Zilwaukee	Saginaw	4,000	2,083 75	48 39	34 70	2,548 89	71 50	823	200	2	4	28	21	1,355 00	728 75
Zuiphen	Ottawa	1,200	530 00	45 00	25 00	1,024 56	1,300 00	107	180	1	1	9	5	405 00	128 00

TABLE XIX.

Financial Statistics of Two Hundred and Seventy-Eight Graded Schools as reported by Superintendents and Principals for the School Year 1889-90.

Districts.	Amount paid superintendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Ada	\$500 00	\$356 00		\$856 00	\$152 41	\$1,008 41	38 31	\$1 48	\$9 79
Addison	700 00	504 00		1,204 00	207 00	1,411 00	12 67	2 18	14 85
Adrian	1,800 00	12,254 30	\$700 00	14,754 30	5,879 76	20,634 06	15 95	5 67	21 62
Alaska	450 00	114 00		564 00	180 00	744 00	8 55	2 73	11 28
Albion	1,100 00	5,108 00		6,208 00	2,754 00	8,962 00	9 51	4 22	13 73
Allegan	1,100 00	4,984 00		6,084 00	2,983 94	9,077 94	10 12	5 00	15 12
Allouez	585 00	598 25		1,171 25	169 19	1,340 44	12 63	1 74	14 37
Almont	800 00	1,282 00		2,082 00	623 69	2,705 69			
Alpena	1,600 00	12,230 00		13,830 00	10,479 06	24,309 06	12 14	9 13	21 27
Ann Arbor	2,200 00	23,416 00	1,200 00	26,816 00	7,172 00	33,988 00	16 14	4 33	20 47
Athens	540 00	450 00		990 00	182 40	1,172 40	7 85	94	8 79
Atlantic Mine	900 00	940 00		1,840 00	996 86	2,836 86	9 02	4 39	13 91
Attica	500 00	425 00		925 00	257 50	1,182 50	5 13	1 43	6 56
Au Sable	1,000 00	4,250 00		5,250 00	1,291 84	6,541 84	12 44	3 06	15 50
Bad Axe	700 00	900 00		1,600 00	686 86	2,286 86	6 61	2 75	9 36
Bath	500 00	400 00		900 00	243 23	1,143 23	9 38	2 52	11 90
Bay City	2,000 00	85,356 61	2,015 84	39,371 95	13,911 01	53,282 96	12 86	4 55	17 41
Belding	800 00	1,500 00		2,300 00	1,904 18	3,904 18	8 51	5 93	14 44
Belleville	850 00	430 00		1,330 00	326 60	1,656 60	9 57	2 35	11 92
Berlin	450 00	270 00		720 00	133 00	853 00	8 00	1 48	9 48
Big Rapids	1,500 00	9,995 00		11,995 00	2,799 15	14,194 15	12 66	3 11	15 77
Birmingham	900 00	1,804 00	450 00	2,954 00	598 67	3,552 67	9 84	1 96	11 82
Blissfield No. 1	750 00	860 00		1,610 00	287 29	1,897 29	12 67	2 28	14 80
Blissfield No. 2	700 00	800 00		1,500 00	554 65	2,054 65	9 98	3 67	13 66
Boyer City	450 00	576 00		1,026 00	372 10	1,398 10	8 84	3 21	12 05
Breckenridge	426 75	270 00		696 75	60 15	756 90	6 34	55	6 89
Brighton	800 00	1,090 00		1,890 00	289 11	2,179 11	9 95	1 52	11 47
Bronson	700 00	900 00		1,600 00	1,900 00	2,900 00	7 34	5 96	13 30
Brooklyn	650 00	950 00	40 00	1,640 00	276 00	1,916 00	10 25	1 73	11 98
Brown City	500 00	220 00		720 00	500 00	1,220 00	6 86	4 76	11 62
Buchanan	900 00	3,218 75		4,118 75	1,013 38	5,132 08	10 50	2 58	13 08
Burnips Corners	480 75	225 00		705 75	95 47	801 22	9 41	1 27	10 68
Byron Center, Kent	450 00	234 00		684 00	62 83	746 83	8 66	79	9 45
Byron, Shiawassee	700 00	485 00		1,185 00	206 61	1,391 61	11 62	2 03	13 65
Cadillac	1,800 00	9,820 00	860 00	11,980 00	3,085 00	15,015 00	17 44	4 42	21 86
Calumet	2,150 00	19,861 00	1,242 00	23,253 00	8,462 00	31,715 00	13 47	4 90	18 37
Cannonsburg	450 00	216 00		666 00	75 83	741 83	8 86	1 51	10 39
Capac	550 00	860 00		1,410 00	549 77	1,959 77	7 42	2 89	10 31
Carrollton No. 1	750 00	1,000 00	3 00	1,753 00	406 54	2,159 54	8 81	2 04	10 85
Carrollton No. 2	500 00	350 00		850 00	365 22	1,215 22	8 25	3 57	11 82
Caro	900 00	2,810 00	400 00	3,810 00	2,283 65	6,093 65	7 96	4 77	12 73
Carsonville	450 00	300 00		650 00	176 85	826 85	4 11	1 12	5 23
Cassville	650 00	700 00		1,350 00	271 48	1,621 48	8 71	1 53	10 26
Cedar Springs	800 00	1,629 00		2,429 00	919 75	3,348 75	7 50	2 90	10 40
Central Mine	765 00	810 00		1,575 00	618 41	2,193 41	10 08	3 94	13 97
Champion	1,800 00	5,979 00		7,779 00	3,929 52	11,708 52	15 53	7 84	23 37
Cheboygan	1,000 00	7,240 00		8,240 00	1,976 57	10,216 57	13 53	3 24	16 77
Chelsea	750 00	2,471 00	96 00	3,317 00	840 07	4,157 07	10 24	2 59	12 83
Clare	650 00	1,096 75		1,746 75	732 15	2,478 90	6 83	2 65	9 48

FINANCIAL STATISTICS.

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TABLE XIX.—Continued.

Districts.	Amount paid superin- tendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for in- cidental.	Total cost of schools.	Cost per capita for in- struction.	Cost per capita for in- cidental.	Total cost per capita.
Clarkston	\$750 00	\$540 00		\$1,290 00	\$352 36	\$1,642 36	\$9 08	\$2 48	\$11 56
Clayton	540 00	324 00		864 00	232 68	1,096 68	11 87	3 06	14 43
Clio	600 00	550 00		1,150 00	477 05	1,627 05			
Coldwater	1,600 00	8,680 00	\$800 00	10,880 00	5,972 00	16,852 00	12 22	6 72	18 94
Columbiaville	500 00	500 00		1,000 00	848 65	1,348 65	6 62	2 27	8 89
Constantine	1,200 00	2,500 00		3,700 00	734 00	4,434 00	15 68	3 11	18 79
Coopersville	553 00	841 50		1,399 50	175 00	1,574 50	6 51	81 7	7 32
Coral	500 00	350 00		850 00	161 12	1,011 12	7 14	1 85	8 40
Crowell	650 00	550 00		1,200 00	165 65	1,365 65	6 43	89 7	7 34
Custer	450 00	315 00		765 00	88 86	853 86	10 07	1 17	11 24
Dansville	600 00	708 00		1,308 00	588 98	1,896 98	14 12	5 06	20 07
Davison	450 00	498 00		948 00	265 87	1,210 87	7 68	2 16	9 84
Dearborn	600 00	315 00		915 00	157 04	1,072 04			
Deerfield	600 00	900 00		1,500 00	208 28	1,708 28	7 21	1 00	8 21
Delray	650 00	800 00		1,450 00	3,000 00	4,450 00	7 08	14 56	21 59
Detroit	4,000 00	238,084 87	17,307 00	307,481 87	112,556 71	420,038 58	15 92	6 00	21 92
Dexter	1,000 00	1,740 00		2,740 00	627 00	3,367 00	13 50	3 00	16 50
Douglas	800 00	540 00		1,340 00	391 84	1,731 84	10 80	3 12	13 93
Dowagiac	1,000 00	4,353 00		5,353 00	4,173 00	9,526 00	11 18	8 71	19 89
Dryden	650 00	475 00		1,125 00	113 99	1,238 99	7 65	77 8	8 42
Durand	600 00	260 00		860 00	600 00	1,460 00	10 49	7 32	17 81
East Lake	750 00	900 00		1,650 00	506 47	2,156 47	9 48	2 91	12 39
Eaton Rapids	900 00	3,448 00		4,348 00	980 78	5,328 78	10 27	2 32	12 59
Ecorse	540 00	378 00		918 00	70 00	988 00	6 78	52 7	7 30
Edmore	600 00	900 00		1,500 00	225 00	1,725 00	11 54	1 78	13 27
Elk Rapids	1,200 00	3,125 00		4,325 00	1,047 99	5,372 99	16 02	3 88	19 90
Elm Hall	400 00	224 00		624 00	101 64	725 64	5 94	96 6	6 90
Elsie	600 00	747 00		1,347 00	380 59	1,677 59	7 28	1 80	9 08
Erie	450 00	270 00		720 00	145 15	865 15	4 96	1 00	5 96
Escanaba	1,300 00	5,200 00		6,500 00	4,047 31	10,547 31	12 17	7 58	19 75
Emersville	700 00	1,200 00		1,900 00	393 94	2,293 94	9 40	1 95	11 35
Fayette	630 00	350 00		980 00	346 60	1,326 60	11 52	4 07	15 59
Filmore Center	297 00	198 00		495 00	82 72	577 72	6 04	2 41	8 45
Filmore No. 1	315 00	180 00		495 00	70 00	565 00	4 82	69 5	5 51
Flint	1,500 00	15,515 00		17,015 75	16,362 75	33,378 50	11 75	11 29	23 04
Fort Gratiot	1,000 00	2,550 00		3,550 00	3,049 79	6,599 79	7 41	6 37	13 78
Fowlerville	750 00	1,300 00		2,550 00	724 06	3,274 06	11 17	3 25	14 42
Frankfort	850 00	2,580 00		3,430 00	723 60	4,153 60	12 25	2 68	14 93
Gaines	600 00	462 50		1,062 50	318 38	1,380 88			
Galesburg	750 00	984 00		1,734 00	490 10	2,224 10	10 84	3 06	13 90
Gallen	675 00	805 50		1,480 50	292 22	1,772 72	8 27	1 68	9 90
Gobleville	675 00	540 00		1,215 00	200 00	1,415 00	8 38	1 40	9 78
Grand Haven	1,300 00	8,994 00	400 00	10,694 00	3,676 39	14,370 39	10 38	3 55	13 86
Grand Ledge No. 9	800 00	1,050 00		1,850 00	524 00	2,374 00	9 25	2 62	11 87
Grand Ledge No. 11	567 00	768 00		1,335 00	441 96	1,777 96			
Grand Rapids	2,500 00	116,892 90	3,000 00	122,892 90	30,804 91	153,197 81	15 89	3 87	19 26
Grayling	1,000 00	1,450 00		2,450 00	1,011 51	3,461 51	11 89	4 91	16 80
Greenland No. 2 fl.	700 00	850 00		1,050 00	106 68	1,156 68			
Greenville	1,200 00	6,482 00	640 00	8,322 00	1,938 23	10,260 23	13 00	3 06	16 06
Grindstone City	700 00	680 00		1,380 00	249 20	1,549 20	6 84	1 31	8 15
Grosse Ile	550 00	250 00		800 00	200 00	1,000 00	16 00	4 00	20 00
Hadley	600 00	400 00		1,000 00	53 31	1,053 31	8 33	44 8	8 77
Hamilton	360 00	190 00		540 00	182 88	722 88	7 20	2 44	9 64
Hancock	1,500 00	5,000 00		6,500 00	2,184 45	8,684 45	17 06	5 73	22 79
Hanover	700 00	950 00		1,650 00	385 84	2,035 84	12 50	2 92	15 42
Hartford	800 00	1,440 00		2,240 00	500 00	2,740 00	9 08	2 02	11 05
Hastings	1,000 00	4,040 00		5,040 00	1,998 20	7,038 20	8 87	3 31	11 68
Highland Station	450 00	290 00		740 00	37 40	747 40	7 03	3 70	10 73
Hillsdale	1,290 00	5,949 00	418 00	7,567 00	2,670 95	10,237 95	12 01	4 24	16 25
Holland	1,100 00	5,025 00	175 00	6,300 00	1,846 00	8,146 00	8 41	2 46	10 87

TABLE XIX.—Continued.

Districts.	Amount paid superintendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Holly.....	\$1,000 00	\$2,104 80	-----	\$3,104 80	\$1,046 37	\$4,151 17	\$11 72	\$3 95	\$15 67
Homer.....	750 00	1,575 00	-----	2,325 00	633 89	2,958 89	9 65	2 63	12 28
Horton.....	486 00	468 00	-----	954 00	159 66	1,113 66	22 71	3 80	26 51
Houghton.....	1,500 00	6,040 00	-----	7,540 00	4,794 89	12,334 89	19 97	12 75	32 72
Howell.....	1,100 00	4,460 00	-----	5,560 00	2,018 74	7,578 74	9 67	3 51	13 18
Hudson.....	1,050 00	2,391 00	\$150 00	3,591 00	350 00	3,941 00	11 50	1 15	12 65
Humboldt.....	687 50	825 00	-----	962 50	622 40	1,584 90	11 32	7 32	18 64
Imley City.....	900 00	2,300 00	-----	3,100 00	867 39	3,967 39	10 01	2 87	12 81
Ionia.....	1,300 00	11,236 65	-----	12,536 65	2,272 22	15,808 87	15 60	4 09	19 69
Iron Mountain.....	1,400 00	8,155 00	-----	9,555 00	5,754 59	15,309 59	11 91	7 18	19 09
Ironwood.....	1,800 00	5,450 00	-----	7,250 00	6,000 00	13,250 00	12 08	10 00	22 08
Jackson No. 1.....	1,800 00	21,184 64	1,475 00	24,459 64	6,789 74	31,249 38	15 73	4 37	20 10
Jackson No. 17.....	1,200 00	8,460 00	-----	9,660 00	2,500 00	12,160 00	9 24	2 40	11 64
Jamestown.....	815 00	216 00	-----	531 00	181 54	712 54	7 08	2 42	9 50
Jennings.....	500 00	800 00	-----	800 00	86 01	886 01	11 11	1 19	12 30
Jonesville.....	1,100 00	2,080 00	-----	3,180 00	655 83	3,785 83	18 55	2 84	16 39
Kalamazoo.....	2,300 00	26,525 10	650 00	29,875 10	8,156 91	37,532 01	11 39	3 16	14 55
Leingsburg.....	650 00	1,000 00	-----	1,650 00	200 00	1,850 00	-----	-----	-----
Lake Linden.....	1,400 00	7,845 00	-----	9,245 00	13,860 42	23,105 42	12 52	18 75	31 27
Lakeview.....	800 00	1,250 00	-----	2,050 00	575 00	2,625 00	8 27	2 31	10 58
Lamont.....	225 00	270 00	-----	495 00	126 10	621 10	6 19	1 51	7 70
L'Anse.....	1,000 00	1,125 00	-----	2,125 00	937 50	3,062 50	18 06	5 51	18 57
Lansing.....	2,000 00	18,501 83	500 00	21,001 83	15,516 05	36,517 88	12 57	9 28	21 85
Lawrence.....	630 00	912 00	-----	1,542 00	215 44	1,757 44	10 14	1 41	11 55
Lawton.....	600 00	898 00	-----	1,498 00	552 04	2,050 04	9 66	3 45	12 81
Leellie.....	900 00	1,650 00	10 00	2,560 00	285 00	2,825 00	9 55	1 36	10 91
Lexington.....	650 00	1,000 00	-----	1,650 00	381 61	2,031 61	8 46	1 96	10 42
Litchfield.....	630 00	891 00	-----	1,521 00	527 08	2,048 08	9 50	2 99	12 79
Lowell.....	700 00	2,999 53	-----	3,699 53	2,897 12	6,596 65	9 25	7 4	16 49
Ludington.....	1,350 00	14,200 00	-----	15,550 00	6,334 86	21,884 86	8 38	3 42	11 80
Luther.....	800 00	1,900 00	-----	2,700 00	937 53	3,637 53	11 64	4 04	15 68
Lyons.....	650 00	918 00	-----	1,568 00	329 55	1,897 55	13 88	2 92	16 80
McBrides.....	550 00	600 00	-----	1,150 00	280 33	1,430 33	7 93	1 98	9 96
Mackinaw City.....	425 00	840 50	-----	1,265 50	82 85	1,348 35	12 76	1 58	14 14
Mancelona.....	720 00	1,580 00	-----	2,250 00	640 00	2,890 00	4 84	1 50	5 84
Manchester.....	950 00	2,280 00	-----	3,230 00	400 00	3,630 00	10 55	1 27	11 82
Manton.....	746 25	1,400 00	-----	2,146 25	905 00	2,451 25	10 07	1 43	11 50
Marcellus.....	540 00	870 00	-----	1,410 00	224 00	1,634 00	9 22	1 46	10 68
Marine City.....	900 00	2,718 75	-----	3,618 75	2,326 90	5,945 65	9 44	6 07	15 51
Marlette.....	700 00	900 00	-----	1,600 00	455 90	2,055 90	9 25	2 98	12 23
Marquette.....	1,200 00	11,570 00	400 00	13,170 00	4,821 61	17,991 61	12 24	4 48	16 72
Marshall.....	1,500 00	7,877 73	1,000 00	9,877 73	3,405 38	13,283 11	16 29	5 62	21 91
Martin.....	630 00	585 00	-----	1,215 00	150 00	1,365 00	8 27	1 02	9 29
Mason.....	1,200 00	3,490 00	-----	4,690 00	1,559 22	6,249 22	12 92	4 30	17 22
Mayville.....	600 00	600 00	-----	1,200 00	300 00	1,500 00	6 32	1 58	8 00
Menominee.....	1,600 00	12,514 88	-----	14,114 88	4,466 18	18,581 06	12 94	4 09	17 03
Metamora.....	650 00	550 00	-----	1,200 00	200 00	1,400 00	12 00	2 00	14 00
Michigan Lake.....	800 00	1,750 00	-----	2,550 00	754 25	3,304 25	11 53	3 41	14 94
Midland.....	1,100 00	4,150 00	-----	5,250 00	4,408 58	9,658 58	11 85	9 95	21 80
Milan.....	600 00	1,081 25	-----	1,681 25	645 22	2,276 47	7 38	2 92	10 80
Milford.....	950 00	1,640 00	-----	2,590 00	746 37	3,336 37	9 49	2 73	12 22
Monroe.....	1,200 00	4,541 25	245 00	5,986 25	2,693 19	8,679 44	11 51	5 18	16 69
Montague.....	900 00	8021 88	-----	3,921 88	1,430 09	5,351 97	10 32	3 76	14 08
Morley.....	600 00	650 00	-----	1,250 00	227 44	1,477 44	-----	-----	-----
Morris.....	700 00	580 00	-----	1,280 00	230 94	1,490 94	-----	-----	-----
Mt. Clemens.....	1,200 00	4,621 00	300 00	6,121 00	5,980 80	12,101 80	10 74	10 50	21 24
Mt. Morris.....	450 00	250 00	-----	700 00	50 00	750 00	7 00	50	7 50
Mt. Pleasant.....	1,000 00	3,789 00	-----	4,789 00	2,654 75	7,443 75	12 16	6 74	18 90
Muskegon.....	2,000 00	42,963 61	8,725 00	48,628 61	16,885 97	65,514 58	13 75	4 77	18 52
Nashville.....	800 00	2,100 00	-----	2,900 00	1,000 00	3,900 00	10 55	3 64	14 19

FINANCIAL STATISTICS.

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TABLE XIX.—Continued.

Districts.	Amount paid superintendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
National Mine	\$900 00	\$950 00		\$1,850 00	\$265 00	\$2,115 00	\$10 57	\$1 52	\$12 09
Negamnee	1,800 00	7,431 25	\$500 00	9,731 25	5,755 11	15,486 36	13 90	8 22	22 12
Newaygo	900 00	1,790 00		2,690 00	500 00	3,190 00	10 35	1 93	12 28
New Hudson	405 00	120 00		525 00	80 00	605 00	10 71	1 63	12 34
New Troy	440 00	260 00		690 00	213 68	903 68	6 45	1 98	8 43
Niles	1,900 00	7,781 25		9,381 25	2,730 87	12,061 62	13 70	4 07	17 77
North Adams	700 00	855 00		1,555 00	488 85	2,043 85	9 96	3 13	13 09
North Branch	700 00	1,200 00		1,900 00	561 80	2,461 80	9 00	2 66	11 66
Northport	450 00	557 00		1,007 00	175 00	1,182 00			
Norway	1,000 00	3,300 00		4,300 00	1,530 06	5,830 06	17 91	6 88	24 29
Oakman	405 00	325 00		780 00	81 00	861 00	8 59	95	9 54
Ontonagon	1,800 00	2,700 00		3,700 00	1,579 54	5,279 54	18 52	7 90	26 42
Orion	600 00	530 00		1,130 00	211 23	1,341 23	10 67	2 01	12 68
Oscoda	700 00	2,750 50		3,450 50	762 61	4,213 11	8 68	1 91	10 54
Otisville	450 00	440 00		890 00	91 15	981 15	7 74	79	8 53
Otsego	1,000 00	1,662 00		2,662 00	300 00	2,962 00	8 63	97	9 66
Ovid	1,000 00	2,260 00		3,260 00	2,326 91	5,586 91	11 92	8 51	20 48
Palmyra	500 00	225 00		725 00	50 00	775 00	7 25	50	7 75
Palo	550 00	456 00		1,006 00	889 28	1,895 28	10 87	4 01	14 88
Paris	410 00	225 00		635 00	34 00	669 00	9 07	49	9 56
Paw Paw	1,000 00	2,680 00	200 00	3,880 00	942 12	4,822 12	10 15	1 15	11 30
Pentwater	900 00	1,800 00		2,700 00	550 00	3,250 00	9 18	2 55	11 73
Perry	550 00	700 00		1,250 00	140 00	1,390 00	8 50	96	9 45
Petoskey	1,100 00	4,026 00		5,126 00	2,477 70	7,597 70	11 68	5 35	17 33
Pierson	405 00	270 00		675 00	187 74	862 74	4 60	91	5 51
Pineckey	700 00	860 00		1,560 00	817 84	2,377 84	11 41	5 98	17 39
Pineconing	750 00	1,100 00		1,850 00	306 61	2,156 61	11 01	1 82	12 83
Pinebog	550 00	250 00		800 00	90 15	890 15	6 80	64	6 94
Plainwell	900 00	2,142 00		3,042 00	751 86	3,793 86	9 00	2 46	11 46
Plymouth	1,000 00	2,025 00		3,025 00	700 00	3,725 00	10 92	2 52	13 44
Pontiac	1,600 00	9,317 00	500 00	11,417 00	2,368 72	13,815 72	13 44	2 79	16 23
Port Austin	700 00	650 00		1,350 00	350 00	1,700 00	10 00	2 60	12 60
Port Hope	450 00	650 00		1,100 00	131 21	1,231 21	9 65	1 15	10 80
Port Huron	1,500 00	15,745 00		17,245 00	10,808 11	28,053 11	10 98	6 87	17 85
Portland	800 00	3,000 00		3,800 00	2,810 37	6,610 37	10 53	7 33	18 41
Port Sanilac	440 00	432 00		872 00	118 17	990 17			
Pottsville	450 00	585 00		1,035 00	267 55	1,302 55	7 45	1 92	9 37
Quincy	950 00	1,900 00		2,850 00	879 83	3,729 83	11 69	3 60	15 29
Ravenna	450 00	270 00		720 00	88 57	808 57	10 21	1 25	11 46
Reading	760 00	1,273 00		2,033 00	585 39	2,569 39	9 68	2 54	12 17
Reed City	900 00	2,930 00		3,830 00	450 00	4,280 00	9 40	1 15	10 55
Reese	525 00	300 00		825 00	99 67	924 67	5 90	71	6 61
Republic	1,580 00	3,950 00		5,510 00	6,134 58	11,644 58	12 24	13 63	25 87
Richland	600 00	600 00		1,200 00	300 00	1,500 00	12 12	3 03	15 15
Richmond	720 00	812 00		1,532 00	375 57	1,907 57	7 66	1 88	9 54
Rockland	1,000 00	1,900 00		2,900 00	512 16	3,412 16	17 28	3 05	20 31
Rogers City	450 00	270 00		720 00	945 65	1,665 65	6 15	8 06	14 23
Romeo	1,500 00	2,550 00		4,050 00	964 27	5,014 27	11 41	2 71	14 12
Royal Oak	400 00	300 00		700 00	250 00	950 00	5 55	1 96	7 53
Saginaw, East Side	2,500 00	49,270 49	2,800 00	54,570 49	19,383 51	73,904 00	15 08	5 84	20 42
Saginaw, West Side	1,900 00	24,609 19	2,225 00	28,734 19	15,674 89	44,409 08	14 10	7 69	21 79
St. Charles	750 00	1,080 00		1,800 00	136 86	1,936 86	10 40	80	11 20
St. Clair, No. 1 fml.	1,000 00	3,925 00	450 00	5,375 00	2,715 12	8,090 12	11 19	5 65	16 84
St. Johns	1,200 00	4,980 00	379 29	6,559 29	2,227 49	8,786 78	11 10	3 76	14 86
St. Joseph	1,100 00	5,275 00		6,375 00	6,615 01	12,990 01			
St. Louis	1,000 00	4,287 50		5,287 50	3,798 85	9,086 35	10 86	7 80	18 66
Saline	700 00	1,680 00		2,380 00	700 00	3,080 00	11 07	3 26	14 33
Sand Beach	750 00	1,650 00		2,400 00	825 79	3,225 79	8 00	2 75	10 75
Saranac	700 00	1,300 00		2,000 00	695 59	2,695 59	10 58	3 68	14 26
Saugatuck	650 00	1,044 00		1,694 00	542 45	2,236 45	8 34	2 67	11 01

TABLE XIX.—Continued.

Districts.	Amount paid superintendent or principal.	Amount paid regular teachers.	Amount paid special teachers.	Total amount paid for instruction.	Amount paid for incidentals.	Total cost of schools.	Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
Sault Ste. Marie.....	\$1,200 00	\$5,546 75	-----	\$6,746 75	\$2,500 00	\$9,246 75	\$9 19	\$3 40	\$12 59
Schoolcraft.....	1,000 00	1,697 00	-----	2,697 00	770 57	3,467 57	12 43	3 55	15 98
Shelby.....	600 00	1,133 25	-----	1,733 25	412 85	2,146 10	7 54	1 79	9 33
Sheridan.....	540 00	630 00	-----	1,170 00	202 82	1,372 82	9 00	1 70	10 70
Sherwood.....	450 00	416 00	-----	866 00	173 44	1,044 44	8 42	1 75	10 17
South Haven.....	900 00	2,192 46	-----	3,092 46	246 44	3,338 90	-----	-----	-----
South Lyon.....	750 00	940 00	-----	1,690 00	360 00	2,050 00	9 71	2 07	11 78
South Frankfort.....	550 00	650 00	-----	1,200 00	275 88	1,475 88	12 00	2 76	14 76
Spalding and Powers.....	550 00	350 00	-----	900 00	402 31	1,302 31	10 98	4 91	15 89
Sparta.....	700 00	900 00	-----	1,600 00	216 32	1,816 32	8 04	97	9 01
Spring Lake.....	1,000 00	2,670 00	-----	3,670 00	870 00	4,540 00	13 08	2 17	15 25
Springport.....	700 00	700 00	-----	1,400 00	225 00	1,625 00	11 13	1 50	12 93
Standish.....	500 00	850 00	-----	1,350 00	100 00	1,450 00	6 07	71	6 78
Stanton.....	880 00	3,240 00	\$58 00	4,128 00	1,580 81	5,708 81	12 75	4 99	17 64
Stanwood.....	815 00	253 00	-----	1,068 00	80 46	1,148 46	8 86	1 25	10 11
Sterling, No. 4.....	500 00	100 00	-----	600 00	113 71	713 71	8 96	1 70	10 66
Stockbridge.....	550 00	560 00	-----	1,110 00	275 00	1,385 00	8 22	2 04	10 26
Sturgis.....	1,100 00	3,298 00	-----	4,398 00	1,568 66	5,966 66	9 54	8 40	12 94
Swanton Bay.....	500 00	350 00	-----	850 00	150 00	1,000 00	7 80	1 35	9 15
Tawas City.....	800 00	2,400 00	-----	3,200 00	340 00	3,540 00	14 81	1 57	16 38
Tecumseh.....	1,100 00	4,040 00	125 00	5,265 00	1,627 19	6,892 19	12 36	3 82	16 18
Tekonsha.....	540 00	690 00	-----	1,230 00	188 67	1,418 67	9 84	1 51	11 35
Thorndale.....	350 00	235 00	-----	585 00	497 06	1,082 06	9 59	8 14	17 73
Three Rivers, No. 1.....	1,500 00	6,245 00	-----	7,745 00	2,644 35	10,389 35	12 82	4 87	17 12
Traverse City.....	1,500 00	7,449 12	450 00	9,399 12	4,381 71	14,230 83	13 52	6 95	20 47
Trenton.....	650 00	750 00	-----	1,400 00	545 98	1,945 98	6 73	2 62	9 35
Trufant.....	800 00	800 00	-----	1,600 00	119 98	1,719 98	6 98	1 40	8 38
Union City.....	1,000 00	3,125 00	-----	4,125 00	1,170 00	5,295 00	10 97	3 11	14 08
Unionville.....	500 00	500 00	-----	1,000 00	112 00	1,112 00	-----	-----	-----
Utica.....	850 00	1,340 00	-----	2,190 00	500 00	2,690 00	11 29	2 58	13 87
Vandalia.....	585 00	855 00	-----	1,440 00	226 60	1,666 60	11 52	1 89	13 41
Vassar.....	1,100 00	2,605 50	90 00	3,795 50	1,183 64	4,979 14	11 03	3 31	14 34
Vermontville.....	700 00	915 00	-----	1,615 00	936 00	2,551 00	7 78	4 50	12 28
Vriesland.....	280 00	250 00	-----	530 00	114 65	644 65	6 30	1 14	7 44
Vulcan.....	750 00	950 00	-----	1,700 00	337 16	2,037 16	22 66	4 50	27 16
Walkertown, No. 14.....	280 00	270 00	-----	550 00	808 61	1,408 61	5 08	6 79	11 87
Walton, No. 1.....	600 00	784 70	-----	1,384 70	405 24	1,790 94	9 20	2 70	11 90
Washington.....	450 00	800 00	-----	1,250 00	135 18	1,385 18	12 50	2 25	14 75
Wayland.....	600 00	598 00	-----	1,198 00	269 00	1,467 00	-----	-----	-----
Wayne.....	750 00	1,600 00	-----	2,350 00	504 51	2,854 51	8 55	1 83	10 38
West Bay City.....	1,500 00	19,395 00	-----	20,895 00	12,873 53	33,768 53	10 50	6 47	16 97
Whitehall.....	1,000 00	2,035 00	-----	3,035 00	1,698 82	4,733 82	7 78	4 32	12 10
White Pigeon.....	1,200 00	1,600 00	-----	2,800 00	635 20	3,435 20	10 42	2 25	12 67
Williamston.....	700 00	1,325 60	-----	2,025 60	1,574 94	3,600 54	9 25	6 87	16 11
Woodland.....	450 00	800 00	-----	1,250 00	225 53	1,475 53	6 25	1 90	8 15
Wyandotte.....	1,100 00	3,270 00	200 00	4,570 00	1,564 18	6,134 18	11 51	4 69	16 20
Yale.....	500 00	1,080 00	-----	1,580 00	414 77	1,994 77	5 82	1 54	7 36
Zeeland.....	580 00	1,002 50	-----	1,582 50	632 42	2,214 92	5 88	2 53	8 41
Zilwaukee.....	750 00	1,338 75	-----	2,088 75	465 14	2,553 89	7 31	1 63	8 94

TABLE XX.

Miscellaneous Statistics of Two Hundred and Seventy-eight Graded Schools as reported by Superintendents and Principals for the School year 1889-90.

Districts.	Total enrollment.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Ada.....	131	108	83	1	2	---	34	---	---	---	---	---	no	no	no
Addison.....	114	95	86	1	2	---	32	---	---	---	---	---	no	no	yes
Adrian.....	1,378	1,087	964	3	23	1	32	all	42	---	20	5	no	yes	yes
Alaska.....	80	66	52	1	1	---	33	---	2	---	---	---	yes	no	no
Albion.....	968	652	641	1	16	---	40	5-7	---	---	---	---	no	no	no
Allegan.....	785	599	546	2	13	---	40	1-2	24	---	---	15	no	no	yes
Alloosa.....	157	97	85	1	2	---	32	1-25	---	---	---	---	no	yes	yes
Almont.....	311	---	---	1	4	---	---	1-3	---	---	---	---	yes	yes	yes
Alpena.....	1,767	1,147	1,061	4	27	---	89	all	20	---	---	23	no	no	no
Ann Arbor.....	2,079	1,656	1,591	9	39	3	35	3-4	273	54	83	180	yes	yes	yes
Athens.....	141	126	97	1	2	---	48	---	---	---	---	---	no	no	no
Atlantic Mine.....	239	204	191	1	2	---	68	---	---	---	---	---	no	no	no
Attica.....	180	180	97	1	2	---	60	---	---	---	---	---	no	no	yes
Aut Sable.....	553	422	347	2	9	---	38	1-2	---	---	---	---	no	no	yes
Bad Axe.....	242	215	175	1	3	---	53	1-30	---	---	---	---	no	yes	yes
Bath.....	180	96	93	1	2	---	32	1-10	---	---	---	---	no	no	no
Bay City.....	5,797	3,061	2,919	6	80	8	37	all	142	6	26	144	yes	yes	yes
Belding.....	337	228	228	1	5	---	38	---	---	---	---	---	no	no	no
Belleville.....	184	139	124	2	1	---	45	---	---	---	---	---	no	no	no
Berlin.....	105	90	85	---	2	---	45	---	---	---	---	---	no	no	yes
Big Rapids.....	1,218	900	855	1	25	1	36	3-4	23	---	---	10	no	yes	yes
Birmingham.....	333	300	257	2	5	---	42	1-8	11	---	7	20	no	yes	yes
Blissfield No. 1.....	188	125	123	1	3	---	32	---	9	---	---	---	no	no	no
Blissfield No. 2.....	236	151	134	1	3	---	33	1-12	2	---	---	4	no	no	yes
Bozoe.....	158	116	95	1	2	---	39	---	---	---	---	---	no	no	no
Breckinridge.....	110	109	78	1	1	---	54	---	---	---	---	---	no	no	no
Brighton.....	267	190	176	1	4	---	38	---	---	---	---	---	no	no	yes
Bronson.....	272	213	192	1	4	---	43	1-30	---	---	---	---	no	no	no
Brooklyn.....	184	160	---	2	2	1	40	1-12	---	---	---	---	no	yes	yes
Brown City.....	140	105	101	1	1	---	52	---	---	---	---	---	yes	yes	no
Buchanan.....	504	392	360	1	11	---	38	3-5	25	4	---	20	no	no	no
Burnip's Corners.....	94	75	65	1	1	---	37	1-20	---	---	---	---	yes	yes	yes
Byron Center.....	104	79	53	1	1	---	39	---	---	---	---	---	yes	no	yes
Byron.....	152	102	88	1	2	---	34	1-5	---	---	---	---	no	no	yes
Cadillac.....	1,049	686	644	1	20	1	34	4-7	11	---	---	10	yes	no	yes
Calumet.....	2,418	1,726	1,534	6	35	1	43	4-5	4	---	---	17	yes	no	no
Cannonsburg.....	118	75	52	1	1	---	37	1-24	---	---	---	---	no	yes	yes
Capac.....	280	190	162	1	3	---	47	---	---	---	---	---	no	no	yes
Carrollton No. 1.....	304	199	169	2	3	---	39	1-10	---	---	---	---	no	no	yes
Carrollton No. 2.....	110	103	65	1	1	---	51	---	---	---	---	---	no	no	no
Caro.....	601	478	410	---	10	1	47	1-5	25	---	---	---	yes	no	no
Carsonville.....	158	158	85	1	1	---	79	---	---	---	---	---	no	no	yes
Cassville.....	178	175	144	1	2	---	58	1-12	4	---	---	6	no	no	yes
Cedar Springs.....	370	319	207	---	6	---	53	1-6	5	---	---	---	no	yes	yes
Central Mine.....	189	157	125	1	2	---	52	---	---	---	---	---	no	no	yes
Champion.....	557	501	368	2	7	1	55	1-2	---	---	---	---	yes	no	no
Cheboygan.....	1,071	609	579	6	12	---	36	1-2	---	---	---	---	no	no	no
Chelsea.....	375	324	313	1	7	1	40	1-8	6	---	---	10	no	yes	no

TABLE XX.—Continued.

Districts.	Total enrollment.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Clare	363	276	280	1	4	—	55	1-10	—	—	—	—	no	no	no
Clarkston	165	142	108	1	3	—	47	—	—	—	—	—	no	yes	yes
Clayton	102	76	76	1	2	—	25	—	—	—	—	—	no	no	yes
Coldwater	1,156	888	831	4	20	1	37	1-2	51	5	—	22	yes	no	yes
Columbiaville	151	151	89	1	2	—	50	—	—	—	—	—	no	yes	yes
Constantine	362	296	209	1	7	—	80	1-6	14	—	—	12	no	no	yes
Coopersville	265	215	183	1	8	—	54	—	—	—	—	—	no	no	yes
Coral	161	119	79	1	1	—	59	1-4	—	—	—	—	no	no	no
Croswell	252	185	162	1	2	—	61	—	—	—	—	—	no	no	yes
Custer	107	76	57	1	1	—	38	—	—	—	—	—	no	no	yes
Dansville	162	99	94	1	3	—	25	1-6	—	—	—	—	no	no	yes
Davison	179	123	107	1	2	—	41	1-6	—	—	—	—	no	no	yes
Dearborn	199	—	109	1	1	—	—	—	—	—	—	—	no	no	no
Deerfield	211	208	—	1	4	—	42	1-12	—	—	—	—	no	no	no
Delray	236	206	151	1	2	—	68	—	—	—	—	—	no	no	no
Detroit	27,771	18,735	17,646	22	470	6	40	all	404	34	100	150	yes	yes	yes
Dexter	262	203	178	1	6	—	29	1-5	11	—	—	4	no	no	no
Douglas	191	124	109	1	2	—	41	—	—	—	—	—	no	no	no
Dryden	169	147	134	1	2	—	49	—	—	—	—	—	no	no	no
Dowagiac	668	479	451	4	9	—	37	3-6	20	—	—	5	no	no	yes
Durand	125	82	76	1	1	—	41	—	—	—	—	—	no	no	yes
East Lake	267	174	158	1	2	—	58	1-12	—	—	—	—	no	no	no
Eaton Rapids	462	423	415	1	11	—	35	1-5	28	—	—	17	no	no	yes
Ecorse	242	185	109	1	2	—	45	1-6	—	—	7	—	no	yes	yes
Edmore	170	130	115	1	3	—	32	—	—	—	—	—	no	no	yes
Elk Rapids	399	270	249	1	8	—	30	1-4	4	—	—	—	no	no	no
Elm Hall	105	105	—	1	1	—	52	—	—	—	—	—	no	yes	yes
Elsie	210	185	140	1	3	—	46	1-10	—	—	—	—	no	no	no
Erie	145	145	81	1	1	—	72	—	—	—	—	—	no	no	no
Escanaba	960	534	497	1	11	—	45	1-4	—	—	—	—	no	no	no
Eseesville	280	202	157	1	3	—	50	—	—	—	—	—	no	no	no
Fayette	123	85	56	1	1	—	43	—	—	—	—	—	no	no	no
Fillmore Center	112	82	66	1	1	—	27	—	—	—	—	—	no	no	no
Fillmore No. 1	117	102	63	1	1	—	51	—	—	—	—	—	yes	no	yes
Flint	2,557	1,449	1,407	3	37	—	36	all	122	13	29	57	no	no	no
Fort Gratiot	816	479	428	1	7	—	60	1-4	—	—	—	—	yes	yes	yes
Fowlerville	251	227	212	1	7	—	33	1-6	—	—	—	—	no	yes	yes
Frankfort	425	278	262	1	8	—	31	1-3	—	—	—	—	no	yes	yes
Gaines	149	—	90	1	2	—	—	—	—	—	—	—	no	no	yes
Galesburg	228	160	152	2	3	—	32	—	—	—	—	—	no	yes	yes
Gallen	191	179	162	1	3	—	45	1-12	—	—	—	—	no	no	no
Gobleville	172	145	124	1	2	—	48	—	—	—	—	—	no	no	no
Grand Haven	1,413	1,085	973	3	22	1	43	4-5	16	—	—	12	no	no	yes
Grand Ledge No. 9	234	200	171	1	3	—	50	1-6	—	—	—	—	no	no	no
Grand Ledge No. 11	198	—	140	1	3	—	—	—	—	—	—	8	no	yes	yes
Grand Rapids	14,678	7,949	7,476	7	218	3	36	all	284	25	44	82	yes	yes	yes
Grayling	275	206	182	1	4	—	42	—	5	—	—	5	yes	yes	yes
Greenland No. 2 f.	48	—	34	1	1	—	—	1-30	—	—	—	—	yes	no	yes
Greenville	990	641	586	2	16	2	37	4-7	30	3	8	7	yes	no	yes
Grindstone City	220	190	132	1	2	—	63	1-20	—	—	—	—	no	no	yes
Groese Isle	75	50	50	1	1	—	25	1-10	—	—	—	—	no	no	no
Hadley	120	120	112	1	2	—	40	—	—	—	—	—	no	no	yes
Hamilton	105	75	62	1	1	—	37	—	—	—	—	—	no	no	yes
Hancock	519	381	362	1	10	—	35	1-4	14	—	12	83	no	no	no
Hanover	177	132	122	2	2	—	38	1-30	—	—	—	—	no	no	no
Hartford	326	248	226	1	5	—	41	—	—	—	—	—	no	no	no
Hastings	855	602	555	2	12	—	42	1-2	35	—	—	15	no	yes	yes
Highland Station	146	101	76	1	1	—	50	—	—	—	—	—	no	no	yes

MISCELLANEOUS STATISTICS.

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TABLE XX.—Continued.

Districts.	Total enrollment	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Hilldale	888	630	597	4	14	1	87	1-2	25			28	yes	yes	yes
Holland	1,024	749	678	1	15	1	50	2-3					yes	no	no
Holly	434	265	249	1	6		38	1-12	4		3	24	no	yes	no
Homer	263	241	188	1	5		40						no	no	yes
Horton	74	43	37	1	2		14						no	no	no
Houghton	472	376	353	2	11		29	1-3	7		9		no	yes	yes
Howell	630	575	565	1	14	1	44	1-2	20			13	yes	no	no
Hudson	357	304	272	1	7	1	37	1-3	21	5		17	yes	no	yes
Humbolt	104	85	64	1	1		42						no	no	no
Inlay City	639	309	235	1	7		38	1-4				6	no	no	no
Ionia	1,361	799	774	4	21	1	31	2-3	55	6	6	20	yes	yes	yes
Iron Mountain	1,594	801	728	1	18		43	1-2				5	no	no	no
Ironwood	906	600	513	2	10		50	1-3	6				yes	yes	yes
Jackson, No. 1	2,342	1,555	1,472	2	41	3	36	all	66	5	14	35	yes	yes	yes
Jackson, No. 17	1,523	1,046	950	2	23		44	all	21			15	no	no	no
Jamestown	90	75	70		2		37						no	no	yes
Jennings	126	72	65	1	1		36						no	no	no
Josephville	312	231	221	1	5		39	1-3	3			5	no	no	no
Kalamazoo	4,445	2,577	2,439	2	67	1	39	all	94	6	36	14	yes	no	yes
Laingsburg	236		151	1	3			1-10	9	2		2	yes	no	yes
Lake Linden	1,029	739	707	1	18		41	1-1	14		10		yes	yes	yes
Lakeview	369	248	211	1	4		50	1-12					no	no	no
Lamont		75	75	1	1		40						no	no	no
L'Anse	184	171	155	1	3		43	1-20					no	no	yes
Lansing	2,552	1,671	1,547	4	41	1	36	all	105			28	yes	yes	yes
Lawrence	213	152	141	1	3		38	1-12					no	no	no
Lawton	252	180	150	1	4		32	1-20	5				no	yes	yes
Lealie	418	268	245	1	6		38	1-10	19				no	no	no
Lexington	202	135	135	1	4		39	1-6					no	no	no
Litchfield	167	160	158	1	3		40	1-10	10				no	no	yes
Lowell	551	400	364	1	10		36	1-4	6			12	no	no	yes
Ludington	2,082	1,365	1,367	2	33		54	4-5	90			18	no	no	no
Luther	390	232	209	1	5		39	1-10					no	no	no
Lyons	146	113	104	1	3		28						no	no	yes
McBrides	170	145	99	1	2		48	1-16					no	yes	yes
Mackinaw City	89	60	52	1	1		30						no	no	no
Mancelona	523	518	403	1	7		65	1-5					yes	yes	yes
Manchester	357	306	280	1	7		38	1-4				14	yes	yes	yes
Manton	346	218	169	1	4		43		2				no	yes	yes
Marcellus	237	158	140	2	2		38						no	no	no
Marine City	565	333	331	1	10		35	7-9	5		5	18	no	no	no
Marlette	255	173	155	1	3		43						yes	yes	yes
Marquette	1,491	1,076	1,002	1	24	1	48	5-7	40	2		28	yes	no	no
Marshall	774	606	578	8	20	2	28	2-3	35	5		7	yes	no	yes
Martin	192	147	134	1	2		49	1-30					no	no	yes
Mason	528	363	339	1	9		36	1-2	18			10	no	yes	yes
Mayville	225	190	190	2	2		37						no	no	yes
Menominee	1,578	1,091	968	1	27		43	all	17			12	no	yes	yes
Metamora	130	100	95	1	2		35	1-15					no	no	no
Michigamme	333	221	200	1	4		44						no	no	no
Midland	690	443	413	1	11		37	1-4	12				no	yes	yes
Milan	240	201	208	1	5		37	1-8					no	no	yes
Milford	355	273	248	1	6		39	1-20					yes	no	no
Monroe	679	520	471	3	13	1	32	2-5	156	8	8	30	yes	yes	yes
Montague	408	330	342	2	7		42	1-12	5				no	no	no
Morley	223		126	1	2								no	no	yes
Morrice				1	2								yes	yes	yes
Mt. Clemens	942	570	554	1	14	1	33	2-3	10			6	yes	no	no
Mt. Morris	1186	100	88	1	1		50						no	no	yes

TABLE XX.—Continued.

Districts.	Total enrollment.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Mt. Pleasant.....	662	336	355	1	11	—	33	2-7	30	—	—	8	no	no	no
Muskegon.....	5,171	3,537	3,235	7	101	4	34	all	66	8	—	22	yes	yes	yes
Nashville.....	318	271	271	1	6	—	39	1-3	6	—	—	4	no	yes	yes
National Mine.....	175	174	87	2	1	—	28	—	—	—	—	—	no	no	no
Negaunee.....	1,114	699	650	1	19	1	34	2-3	11	—	—	—	yes	yes	yes
Newaygo.....	336	259	254	1	5	—	43	1-3	—	—	—	—	no	no	no
Mew Hudson.....	52	49	40	1	1	—	24	—	—	—	—	—	no	no	yes
New Troy.....	108	107	59	1	1	—	53	—	—	—	—	—	no	no	yes
Niles.....	542	670	644	2	17	—	37	1-4	21	1	—	15	no	yes	yes
North Adams.....	204	156	135	2	2	—	89	1-12	—	—	—	—	no	no	yes
North Branch.....	294	211	181	1	4	—	42	1-10	—	—	—	—	no	no	yes
Northport.....	156	—	—	—	3	—	—	1-12	—	—	—	—	no	no	no
Norway.....	394	240	216	1	7	—	30	1-6	2	—	—	9	no	no	no
Okemos.....	135	85	60	1	2	—	28	—	—	—	—	—	no	no	yes
Ontonagon.....	297	199	170	2	5	—	28	2-5	—	—	—	—	no	no	no
Orion.....	161	105	96	1	2	—	35	1-20	5	—	—	—	no	no	no
Oscoda.....	693	400	321	—	10	—	40	1-6	—	—	—	—	no	no	no
Otisville.....	188	115	91	1	2	—	38	—	—	—	—	—	no	no	yes
Ottego.....	451	310	284	1	6	—	44	1-3	14	—	—	—	yes	no	no
Ovid.....	383	273	251	1	7	—	34	1-3	—	—	—	—	no	no	no
Palmyra.....	105	100	95	1	1	—	50	—	—	—	—	—	no	yes	yes
Palo.....	110	97	88	1	2	—	32	—	—	—	—	—	no	no	no
Paris.....	77	70	57	1	1	—	35	—	—	—	—	—	no	no	yes
Paw Paw.....	356	273	262	1	7	1	34	3-7	18	—	—	8	yes	no	yes
Pentwater.....	392	294	277	1	5	—	49	1-6	10	—	—	—	no	yes	yes
Perry.....	164	147	125	2	1	—	49	—	—	—	—	—	no	no	yes
Petokey.....	541	438	377	1	12	—	33	1-2	26	—	—	14	no	no	no
Pierson.....	147	118	88	1	1	—	59	—	—	—	—	—	no	no	no
Pinconning.....	800	168	—	1	3	—	42	—	—	—	—	—	no	no	yes
Pinckney.....	184	136	124	2	2	—	34	1-10	—	—	—	—	no	no	no
Pinnebog.....	127	126	98	1	1	—	63	1-15	—	—	—	—	no	no	no
Plainwell.....	396	305	276	1	7	—	38	1-5	6	—	—	—	yes	no	no
Plymouth.....	329	277	231	1	6	—	40	1-4	4	—	—	13	no	no	yes
Pontiac.....	1,204	859	832	4	20	—	39	1-4	51	4	3	18	yes	no	no
Port Austin.....	144	135	127	1	2	—	45	—	1	—	—	—	no	yes	yes
Port Hope.....	142	114	94	—	3	—	38	1-30	—	—	—	—	no	no	no
Port Huron.....	2,610	1,573	1,443	2	39	—	39	all	49	5	2	—	no	no	no
Portland.....	457	359	351	—	10	—	35	1-2	—	7	—	—	yes	yes	yes
Port Sanilac.....	174	—	125	1	2	—	—	—	—	—	—	—	no	no	no
Pottersville.....	201	189	129	2	1	—	46	—	—	—	—	—	no	no	no
Quincy.....	326	243	221	1	6	—	35	1-3	—	—	—	—	no	yes	yes
Rayenna.....	131	70	66	1	1	—	54	—	—	—	—	—	no	no	no
Reading.....	280	211	192	1	4	—	42	—	—	—	—	—	no	no	no
Reed City.....	504	407	353	2	7	—	45	1-4	9	—	—	—	no	no	no
Reese.....	191	140	88	1	1	—	70	—	—	—	—	—	no	no	no
Republic.....	629	450	400	1	8	—	50	1-2	—	—	—	—	no	yes	yes
Richland.....	153	99	89	1	2	—	33	—	—	—	—	—	no	no	yes
Richmond.....	214	200	122	1	3	—	50	1-6	—	—	—	—	yes	yes	yes
Rockland.....	163	168	110	2	3	—	36	—	—	—	—	—	no	yes	yes
Rogers City.....	123	117	82	1	1	—	58	—	—	—	—	—	no	no	yes
Romeo.....	573	354	339	1	7	—	44	—	55	2	5	22	no	no	no
Royal Oak.....	126	126	106	1	1	—	63	—	—	—	—	—	yes	yes	yes
Saginaw, East Side.....	3,302	3,619	3,443	10	89	3	36	all	164	13	—	56	yes	yes	yes
Saginaw, West Side.....	3,871	2,087	1,962	5	59	3	32	all	94	7	18	28	yes	yes	no
St. Charles.....	296	178	146	1	3	—	43	1-12	—	—	—	—	no	no	no
St. Clair.....	680	479	441	2	10	1	41	4-7	12	—	2	8	yes	no	no
St. Johns.....	877	591	528	2	12	1	42	1-2	25	—	—	15	yes	no	no
St. Joseph.....	848	—	599	2	14	—	—	1-3	2	—	—	—	no	no	no
St. Louis.....	771	487	420	2	11	—	40	1-4	31	5	—	10	yes	yes	yes

TABLE XX.—Continued.

Districts.	Total enrollment.	Average No. belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	No. of special teachers.	Average No. of pupils to each teacher.	Portion of superintendent's time given to supervision.	Number of pupils studying—				Is special instruction given in—		
									Latin.	Greek.	French.	German.	Vocal music?	Drawing?	Pennmanship?
Saline	258	214	206	1	5	---	85	1-10	2	---	---	9	no	no	no
Sand Beach	315	300	290	1	5	---	50	3-10	13	---	---	---	yes	yes	yes
Sarnes	281	199	175	1	4	---	38	---	---	---	---	---	no	no	yes
Saugatuck	340	308	188	1	4	---	40	1-6	---	---	---	---	no	no	no
Sault Ste. Marie	1,170	785	579	1	15	---	46	1-2	18	---	---	14	no	no	no
Schoolcraft	290	217	196	1	5	1	36	1-9	12	---	---	---	yes	no	no
Shelby	308	230	200	1	4	---	46	---	---	---	---	---	no	no	no
Sheridan	130	119	85	1	2	---	40	1-20	---	---	---	---	yes	yes	yes
Sherwood	103	102	53	1	2	---	34	---	---	---	---	---	no	no	yes
South Haven	520	---	385	1	8	---	---	---	---	---	---	---	no	no	no
South Lyon	205	174	143	1	3	---	43	1-5	---	---	---	---	no	no	no
South Frankfort	144	100	98	1	2	---	33	---	---	---	---	---	no	no	no
Spalding & Powers	139	82	65	1	1	---	41	---	---	---	---	---	no	no	yes
Sparta	221	199	198	1	3	---	49	1-20	10	---	---	---	no	no	yes
Spring Lake	535	325	307	1	9	---	32	1-4	2	---	---	3	no	no	no
Springport	152	125	108	1	2	---	41	1-8	---	---	---	---	yes	yes	yes
Standish	241	140	98	1	1	---	70	---	---	---	---	---	no	no	no
Stanton	486	323	306	---	10	1	32	1-6	3	---	---	---	yes	no	no
Stanwood	96	64	64	---	2	---	32	---	---	---	---	---	no	no	yes
Sterling No. 4	92	67	60	1	1	---	33	---	---	---	---	---	yes	no	no
Stockbridge	165	135	102	1	2	---	45	---	---	---	---	---	no	no	no
Sturgis	602	461	413	1	10	---	42	2-3	10	---	---	20	no	no	no
Sutton's Bay	115	109	106	1	1	---	54	1-6	---	---	---	---	yes	yes	yes
Tawas City	250	216	198	1	5	---	36	1-4	---	---	---	7	no	yes	yes
Tecumseh	531	426	415	1	13	1	30	1-2	31	---	---	46	yes	no	no
Tekonsha	196	125	108	1	3	---	41	---	---	---	---	---	no	no	yes
Thornville	87	61	50	1	1	---	30	---	---	---	---	---	no	yes	yes
Three Rivers	762	604	575	2	16	---	38	3-8	27	---	---	10	no	no	no
Traverse City	948	685	650	1	13	1	38	2-3	20	---	---	10	no	yes	yes
Trenton	313	206	172	1	3	---	52	---	20	---	---	---	no	no	no
Trufant	124	86	49	---	2	---	43	---	---	---	---	---	no	no	no
Union City	405	376	339	1	10	---	34	1-6	26	---	---	7	yes	no	no
Unionville	136	---	89	1	2	---	---	---	---	---	---	---	no	no	no
Utica	218	194	175	2	3	---	88	---	5	---	---	5	no	no	yes
Vandalia	144	125	102	1	3	---	31	---	9	---	---	---	no	no	no
Vassar	518	344	315	1	8	1	28	1-6	19	---	---	16	yes	no	yes
Vermontville	248	206	184	1	3	---	52	1-10	---	---	---	---	no	no	no
Vriesland	106	100	68	1	1	---	50	---	---	---	---	---	yes	yes	yes
Vulcan	185	75	74	1	2	---	25	---	---	---	---	---	no	no	no
Walkertown	131	118	102	---	2	---	59	---	---	---	---	---	no	no	no
Walton No. 1	222	151	141	1	3	---	38	1-10	8	---	---	---	no	no	no
Washington	86	60	50	1	1	---	30	---	---	---	---	---	no	no	no
Wayland	145	---	109	1	3	---	---	1-12	---	---	---	---	no	no	no
Wayne	379	275	221	1	5	---	47	3-8	4	---	---	---	no	no	no
West Bay City	3,663	1,989	1,786	5	47	---	39	all	43	---	6	13	no	no	no
Whitehall	506	390	370	1	8	---	43	1-5	---	---	---	---	no	no	no
White Pigeon	292	263	251	1	5	---	44	1-6	---	---	---	---	yes	yes	yes
Williamston	462	273	246	2	5	---	39	1-5	18	---	---	---	no	no	no
Woodland	120	120	75	2	---	---	60	1-16	---	---	---	---	no	yes	yes
Wyandotte	507	397	348	1	9	1	39	1-3	3	---	---	14	yes	no	no
Yale	306	268	215	1	4	---	53	---	---	---	---	---	yes	no	yes
Zeland	324	269	242	1	4	---	54	1-18	---	---	---	---	yes	no	yes
Zionsville	295	255	280	3	3	---	47	3-4	---	---	35	70	yes	no	yes

TABLE XXI.

Statistics of the High School Department of One Hundred and Ninety-five Graded School Districts, compiled from Reports of Superintendents and Principals for the School Year 1889-90.

Districts.	Enrollment in department.	Average No. attending.	Average daily attendance.	Number of men teachers.	No. of women teachers.	Average No. of pupils to each teacher.	No. of non-graduate pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Addison	23	17	16	1		17	9	19	6	\$41 18	\$2 18	\$43 36
Adrian	152	125	118	1 1-2	3	28	21	17	6	27 73	5 67	33 40
Albion	184	122	119	1-3	4	29	17	17		4 22	4 22	
Allegan	111	85	80	1 1-2	1	34		17		17 83	5 00	22 83
Allouez	61	42	35	1		42				16 07	1 74	17 81
Alpena	83	74	69	4	1	17		18		37 42	9 13	46 55
Ann Arbor	659	514	496	9	7	35	817	19	4	25 52	4 38	29 85
Atlantic Mine	57	50	50	1		57				18 00	4 90	22 89
Attica	56	56	30	1		56	8			8 98	1 43	10 36
Au Sable	60	43	36	2	1	22	8	16		12 44	8 06	15 50
Bad Axe	39	30	22	1		30	8			23 33	2 75	26 08
Bath	72	30	30	1		30				16 66	2 52	19 18
Bay City	308	238	233	2	6	30	7	18	9	26 44	4 55	30 99
Belding	25	20	20	1		20	7			40 00	5 98	45 98
Belleville	77	59	51	1		46	32	16		14 32	2 35	16 67
Big Rapids	65	60	60	1	4	20	2	18		25 00	3 11	28 11
Birmingham	91	74	74			65	18			1 98		
Blissfield No. 1	67	47	45	1	1	24	23	19		22 34	2 23	24 57
Blissfield No. 2	82	50	46	1	1	25	19	18		11 81	3 67	14 98
Boyne	32	26	21	1		26	14	17		17 81	8 21	20 52
Brighton	109	75	72	1	1	39	44	16		14 62	1 52	16 14
Bronson	44	33	30	1		38	8	19		5 96		
Brooklyn	40			1		21	18			1 73		
Buchanan	88	65	62	2-5	3	21	26	18		13 82	2 58	16 40
Byron	70	43	40	1		43	28			2 08		
Cadillac	64	43	40	2-3	2	15	5	19	4	54 80	4 42	59 22
Calumet	82	74	69	2		74	8	14	9	4 90		
Capac	58	43	38	1		43	14	17		12 79	2 89	15 68
Caro	85	71	61		2 1-4	25	25	17	8	4 77		
Cassville	4		4	1		4	2			19 00	1 55	20 55
Cedar Springs	57	51	51		2	25	10	18		24 00	2 90	26 90
Central Mine	86	68	52	1		68				11 25	3 94	15 19
Champion	39	30	29					16	7		7 84	
Cheboygan	48	38	32	1	1	38	2	17			3 24	
Chelsea	76	52	50	1	1	82	29	19			2 59	
Clare	54	39	34	1		39	12	18	6	15 25	2 65	17 90
Clarkston	56	45	33	1		45	13	16		16 44	2 49	18 92
Coldwater	153	118	113	2 5-6	1 2-3	26	47	18		29 66	6 72	36 38
Columbiaville	43	43	24	1		43	1	16		11 63	2 27	13 90
Constantine	94	61	56	1	3	15		17			3 11	
Coopersville	85	65	43	1		65	24			8 58	81	9 39
Croswell	52	36	27	1		36				18 06	8 89	18 94
Dansville	29	17	16	1		17	8	18			5 95	
Davison	41	35	32	1		35	15	15		7 68	2 16	9 84
Deerfield	46	27	25	1		27	12	17			1 00	
Detroit	1,042	778	754	8	23	24	140	18	6	38 81	6 00	44 81
Dexter	60	47	45	1	1	24	16			25 53	3 00	28 53
Douglas	80	47	41			47	26			17 02	3 13	20 15
Dowagiac	64	51	50	2	1	20	12	18		29 06	8 71	37 71
Eaton Rapids	113	93	90	1	2	31	35	13	2	10 72	2 32	13 04

HIGH SCHOOL STATISTICS.

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TABLE XXI.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	Number of men teachers.	No. of women teachers.	Average No. of pupils to each teacher.	No. of non-resident pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Edmore.....	30	20	20	1	—	20	—	18	—	\$11 69	\$1 78	\$13 42
Elk Rapids.....	45	35	32	1	2-4	32	10	19	—	36 00	3 88	39 88
Elsie.....	43	38	34	1	—	38	5	14	—	15 78	1 80	17 50
Escanaba.....	50	43	39	1	—	23	2	17	—	32 56	7 53	40 14
Essexville.....	50	42	38	1	—	42	—	14	—	9 52	1 95	11 47
Flint.....	366	243	238	3	6	29	61	17	6	20 39	11 29	31 68
Fort Gratiot.....	85	59	51	—	1	28	—	16	—	6 37	—	—
Fowlerville.....	83	63	67	2	3-4	34	10	19	—	11 45	3 23	14 70
Galesburg.....	58	48	44	2	5-6	31	30	18	—	12 00	3 06	15 06
Gallen.....	68	63	58	1	—	31	22	18	—	—	1 63	—
Gobleville.....	89	80	24	1	—	80	6	—	—	22 50	1 40	23 90
Grand Haven.....	58	51	50	1	2	23	3	19	5	25 37	3 55	28 92
Grand Lodge No. 9.....	56	39	33	1	—	39	40	20	—	—	2 62	—
Grand Lodge No. 11.....	37	26	1	—	—	—	5	18	—	—	—	—
Grand Rapids.....	788	572	545	4 1-2	15 1-2	28	246	18	2	29 76	3 87	33 63
Grayling.....	59	48	42	1	1	24	—	18	—	22 00	4 91	26 91
Greenville.....	159	120	114	1 8-7	3 2-3	25	17	18	6	22 48	3 06	25 54
Grindstone City.....	61	56	35	1	—	56	—	15	10	12 50	1 31	13 81
Hadley.....	69	69	57	1	—	69	37	17	—	8 70	4 44	9 14
Hancock.....	58	51	49	2-4	1	30	11	17	4	—	5 78	—
Hanover.....	45	40	37	1	—	40	16	18	—	20 00	2 92	22 92
Hartford.....	76	57	53	1	—	28	28	16	—	—	2 02	—
Hastings.....	172	121	117	2	1	40	87	18	8	11 98	3 31	15 29
Hillsdale.....	141	120	117	1 2-3	1	40	27	18	—	14 25	4 24	18 49
Holly.....	87	48	43	—	—	29	—	17	—	—	3 95	—
Homer.....	48	38	34	1	1	23	9	16	—	—	2 63	—
Houghton.....	44	37	35	2	1-2	—	9	—	—	12 75	—	—
Howell.....	76	66	65	1-2	2	33	—	—	—	—	3 51	—
Hudson.....	98	86	74	1	2	29	38	16	10	15 21	1 15	16 36
Imlay City.....	36	48	45	1	1	24	16	17	—	19 75	2 80	22 55
Ionia.....	167	122	118	3	4	23	181	19	—	—	4 09	—
Iron Mountain.....	25	16	16	1-2	1 2-3	10	—	18	—	—	7 17	—
Ironwood.....	62	50	42	1	1	25	—	16	—	—	10 00	—
Jackson No. 1.....	254	207	198	1 1-3	5 1-2	32	41	18	6	26 69	4 37	31 06
Jackson No. 17.....	68	58	57	1	2	29	5	18	—	17 30	2 40	19 70
Jonesville.....	58	45	44	1	1	23	23	19	—	26 29	2 84	29 13
Kalamazoo.....	266	231	228	1 1-3	8	29	23	19	8	23 52	3 16	26 68
Leingsburg.....	91	67	67	1	1	19	—	—	—	—	—	—
Lake Linden.....	53	46	45	1-2	1	45	—	17	6	28 85	18 75	47 13
Lakeview.....	30	49	42	1	—	49	25	16	—	12 85	2 31	15 16
L'Anse.....	49	43	38	1	—	43	—	18	—	23 25	5 51	28 76
Lansing.....	223	184	176	4	5	26	36	18	4	30 61	9 28	39 89
Lawrence.....	75	57	54	—	2	23	24	—	—	17 37	1 41	18 78
Lawton.....	68	52	50	1	2-3	31	17	17	—	—	3 45	—
Leads.....	70	49	38	1	1	22	24	17	—	—	1 38	—
Lowell.....	97	62	56	1	1	31	41	17	4	11 78	7 24	19 02
Luther.....	67	46	40	1	1	23	—	18	—	25 00	4 04	29 04
Lyons.....	27	19	17	1	—	19	5	18	—	34 21	2 92	37 13
McBride's.....	50	36	25	1	—	25	2	17	—	22 00	1 93	23 93
Mancelona.....	43	48	46	1	1	24	4	16	—	6 43	1 50	7 98
Manchester.....	51	51	51	3-4	1	25	1	18	—	—	1 27	—
Manton.....	45	23	22	1	—	23	10	18	—	32 88	1 43	34 31
Marcellus.....	95	60	56	2	—	30	16	15	—	—	1 46	—
Marine City.....	58	33	30	2-9	2	20	5	—	—	30 90	6 07	36 97
Mariette.....	102	61	56	1	1	31	15	—	—	15 24	2 98	18 22
Marquette.....	98	85	80	1	3 3-10	26	—	15	8	26 06	4 48	30 54
Marshall.....	84	71	69	1 5-6	2	20	32	11	—	34 82	5 62	40 44
Martin.....	75	60	54	1	—	60	55	17	—	10 50	1 02	11 52
Mason.....	73	—	—	1	2	—	51	—	4	—	4 30	—
Mayville.....	80	70	70	—	—	—	—	18	—	—	1 53	—

TABLE XXI.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	Number of men teachers.	No. of women teachers.	Average No. of pupils to each teacher.	No. of non-resident pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Metamora.....	40	80	80	1	1	30	4	18		\$21 06	\$2 00	\$23 06
Midland.....	64	39	38	1	1	23	7	18			9 95	
Milan.....	41	83	85	1	1	33	12	18			2 92	
Milford.....	81	84	59	1	1-3	43	25	18		17 40	2 73	20 13
Monroe.....	98	83	75			12	28	19	4	36 00	5 18	41 18
Montague.....	54	46	42	1	1	23	14	16	8		3 76	
Morley.....	60		32	1		18						
Mt. Clemens.....	63	51	46	1-3	2	25	23	19	9	26 50	10 50	37 00
Mt. Pleasant.....	49	41	35	5-7	1	15	11	19		36 54	6 74	43 53
Muskegon.....	201	165	159		4	27	22	18		15 20	7 10	25 30
Nashville.....	70	65	65	1	1	40	20	18			3 64	
National Mine.....	34	33	9	1		33				27 27	1 52	28 79
Negaunee.....	79	67	65	1	2	30		18			8 22	
Newaygo.....	55	44	44	2-3	1	35		17			1 98	
Niles.....	82	70	69	1	3	22	15	18		30 95	4 07	35 02
North Adams.....	99	67	67	1	1	33	43	18		16 04	8 13	19 17
North Branch.....	48	30	22	1		30	24	18		9 00	2 66	11 66
Norway.....	39	30	29	1	1	25		21		24 16	6 38	30 54
Oscoda.....	13	7	6		1	7	2	16			1 91	
Otseville.....	49	20	20	1		20	5	16		22 50	7 79	23 29
Oteago.....	84	67	62	1	1	34	38	16	4		97	
Ovid.....	58	39	35	1-3	1	39	32	17		19 62	8 51	28 13
Palo.....	45	40	38	1		40	24	16		18 75	4 01	17 76
Paw Paw.....	67	51	49	4-7	2	21	30	18		38 28	1 15	34 38
Pentwater.....	42	32	28	5-6	3-4	16	8	16	6		2 55	
Perry.....	55	44	37	1		44	20	16	9	12 50	95	13 45
Petoskey.....	50	43	37	1	1 3-4	30	3				5 65	
Pinckney.....	21	17	16	1		17	13	18		38 05	5 98	44 08
Pinconning.....	47	24		1		24				31 25	1 82	33 07
Plymouth.....	58	54	47	6-8	1	31	32	18		21 29	2 52	23 81
Pontiac.....	121	95	92	2 1-4	3	23	31	18		32 88	2 79	35 62
Port Austin.....	10	10	9	1		10		16		70 00	2 60	72 60
Port Hope.....	30	22	20		1	22	2	16	4	20 45	1 15	21 60
Port Huron.....	108	91	87	1	2 1-3	27	6	18		30 28	6 67	37 13
Portland.....	98	79	76		3	27		18			7 83	
Pottsville.....	69	47	44	1		47	10	16	6	9 78	1 92	11 70
Quincy.....	68	49	43	1	1	29	18	17	9	20 20	8 60	28 80
Reading.....	48	44	40	1		44	15	16	6	17 27	2 54	19 81
Reed City.....	55	47	43	1	2-3	24	7	18		15 50	1 15	16 65
Republic.....	40	25	20	1-2	1	20					13 68	
Richland.....	52	34	31	1		34	20	16		17 64	3 03	20 67
Richmond.....	53	50	42	1		50	23	21		14 40	1 88	16 28
Romeo.....	106	87	85	1	1 1-2	58	45	15	4	20 70	2 71	23 41
Saginaw, East Side.....	367	244	238	2 2-3	7	24		19	7		5 34	
Saginaw, West Side.....	201	145	142	1	5	24	14	17	4	28 36	7 69	36 05
St. Charles.....	55	32	30	1		32	14	17		23 44	80	24 24
St. Clair.....	46	33	31	1	1 3-7	17	6	19		38 53	5 65	44 18
St. Johns.....	101	80	73	1	2	30	33	18	9	21 64	3 76	25 40
St. Joseph.....	66		56	1	2		6					
St. Louis.....	65	39	36	1	1	39	21			30 80	2 50	33 30
Saline.....	41	31	31	1	1	16	15	19		15 95	38	16 28
Sand Beach.....	30	29	28	1	1	15		18		14 57	2 75	17 32
Saranac.....	28	23	21	1		23	9	17		30 48	3 68	34 11
Sargatuck.....	49	25	23	1		25	3	15		21 90	2 67	24 57
Sault Ste. Marie.....	54	33	31	1-2	1	22	12	18		8 07	3 40	6 47
Schoolcraft.....	61	51	48	1	1	27	21	17	6		3 55	
Sheridan.....	47	27	22	1		27	12			20 00	1 70	21 70
South Lyon.....	58	49	38	1		49	26	17	6	15 30	2 07	17 37
South Frankfort.....	37	24	1			24				22 90	2 76	25 66
Sparta.....	47	42	37	1		42	22	17		16 67	97	17 64
Spring Lake.....	59	34	29	1-3	2	29	4	17		19 70	2 17	21 87
Springport.....	42	34	24	1		34	21	16		20 00	1 80	21 80

HIGH SCHOOL STATISTICS.

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TABLE XXI.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	Number of men teachers.	No. of women teachers.	Average No. of pupils to each teacher.	No. of non-reading pupils.	Average age of class graduated.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Stanton	51	37	36	1	2	18	9	17	6		\$4 89	
Stockbridge	60	49	38	1	2	49	25	17	6	\$11 23	2 04	\$13 26
Sturgis	78	64	59	1-3	2	32	24	17	6		3 40	
Tawas City	50	42	33	1	1	21	16	16			1 57	
Tecamech	119	101	100	1	3	33	31	18		19 60	3 82	23 42
Tekonsha	72	30	30	1	1	20	20	14			1 51	
Three Rivers	112	90	88	2	2	22	18	18	8		4 37	
Traverse City	142	92	92	1-3	3	32	52	18	7		6 95	
Trenton, No. 1	53	38	32	1	1	33	2	15		17 10	2 62	19 72
Union City	108	90	87	1	4	22		18	5		3 11	
Unionville	23		24		1		7	17				
Utica	42	36	33	1		35	19	18	7		2 58	
Vandalia	47	35	32	1		35	8	18		16 71	1 89	18 60
Vassar	65	46	45	1	1	21	18	18	8	23 54	3 31	26 85
Vermontville	72	58	54	1		58	34	18		10 86	4 50	15 36
Walton, No. 1	61	40	37	1		40	16				2 70	
Wayland	71		53	1-2	1		30	17				
Wayne	65	30	37	1	1	24	14			22 04	1 83	23 87
West Bay City	115	94	89	3	2	23		18			6 47	
Whitehall	53	41	41	1	1-2	30	7	18		22 00	4 32	26 32
White Pigeon	93	82	80	1	1	41	36	18		15 05	2 25	17 30
Williamston	86	58	47	1	1	26		17		19 24	6 87	26 11
Yale	55	37	30	1		37	16			13 51	1 54	15 05

TABLE XXII.

Statistics of Grammar Department of Two Hundred and Seventy-eight Graded School Districts, compiled from reports of Superintendents and Principals for the School Year 1889-90.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Average number of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Ada.....	70	70	53	1	1	35	3				\$1 48	
Addison.....	38	30	26		11	30				20 60	2 18	\$11 78
Adrian.....	430	345	322	5-12		31	17	14		14 28	5 07	19 93
Alaska.....	45	38	27	1		38	7			11 84	7 73	14 57
Albion.....	299	206	200	1-8	4	51	8	14			4 22	
Allegan.....	253	219	304	1-4	5	43		14			5 00	
Allouez.....	42	24	21		1	24				11 66	1 74	13 40
Alpena.....	417	308	286		17	44	48	14		11 92	9 13	21 05
Ann Arbor.....	570	469	451	1	14	33	45	14	9	13 38	4 33	17 69
Athens.....	77	70	56	1	1	35	16	20			94	
Atlantic Mine.....	57	51	51		1	51	4			8 60	4 80	13 69
Attica.....	85	38	34		1	38				1 43	1 43	
Au Sable.....	118	85	71	1	2	48	1	12	8	12 44	3 06	15 50
Bad Axe.....	101	96	83		2	47					2 75	
Bath.....	41	36	28		1	26					2 52	
Bay City.....	1,324	750	722	2	24	31	3	13	9	15 53	4 55	20 10
Belding.....	108	68	66		2	35	5				5 08	
Belleville.....	47	38	33	1		38	2	12		7 21	2 35	9 56
Berlin.....	68	50	50		1	50	15			9 00	1 48	10 48
Big Rapids.....	300	225	200		7	32	6	14		13 00	3 11	16 11
Birmingham.....	108	96	94	1-16	2	40					1 95	
Blissfield No. 1.....	59	44	42		1	44				6 81	2 23	9 04
Blissfield No. 2.....	72	43	38		1	43				10 12	3 07	13 79
Boyer.....	50	37	34		1	37					3 21	
Breckenridge.....	50	49	28	1		49	7			8 71	53	9 26
Brighton.....	59	43	40		1	43	5	14		5 81	1 52	7 83
Bronson.....	53	45	40		1	45	2	12			5 06	
Brooklyn.....	68			1							1 73	
Buchanan.....	172	150	140		4	37	10			10 85	2 58	13 43
Burnip's Corners.....	39	30	27	1		30	17	19		16 08	1 27	17 30
Byron Center.....	46	32	25	1		32	6			14 06	79	14 86
Byron.....	85	30	26		1	30					2 03	
Cadillac.....	177	128	119	1-3	4	82		14	8	17 84	4 42	21 76
Calumet.....	243	207	188	2	2 1-2	57	2	10	9		4 90	
Cannonsburg.....	54	30	21	1		30	6			15 00	1 51	16 51
Capac.....	105	88	74		2	44	6	14			2 89	
Caro.....	128	119	100		2 3-4	41	7	15	3		4 77	
Carrollton No. 1.....	140	62	52	2		31	5			16 13	2 04	18 17
Carrollton No. 2.....	44	37	32	1		44	1			11 38	3 57	14 93
Carsonville.....	54	54	30	1		54				8 83	1 12	9 45
Caseville.....	76	76	62		1	76		16		8 00	1 55	9 55
Clayton.....	57	41	41	1		25	21	17		14 47	8 06	17 53
Cedar Springs.....	101	98	68		2	49	2	14		6 30	2 90	9 20
Central Mine.....	53	48	38		1	48					3 94	
Champion.....	113	92	38	1-4	2	40					7 84	
Cheboygan.....	215	143	128	5		29		14			3 24	
Chelsea.....	113	100	98		2	50	6	14			2 59	
Clare.....	66	54	48		1	54		14		6 53	2 65	9 15

TABLE XXII.—Continued.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Average number of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Clarkston	52	49	38		1	49	10	12			\$2 48	
Coldwater	394	317	298	7-12	8 1-2	40		14	10	\$11 16	6 72	\$17 88
Columbiaville	49	49	30		1	49					2 27	
Constantine	105	59	54		2	29		11	1		3 11	
Coopersville	75	75	70		1	75		18			81	
Coral	75	50	36	1		50	4	15		10 00	1 35	11 35
Crowell	92	51	51		1	51					89	
Custer	43	31	27	1		31	2	18		14 52	1 17	15 69
Danversville	93	56	56		2	28	6	10			5 65	
Davison	59	48	38		1	48	8	11		7 68	2 16	9 84
Dearborn	73		48	1								
Deerfield	68				2		2				1 00	
Delray	50	46	43	1		46	2	16		14 13	14 56	28 69
Detroit	9,100	4,823	4,597	11	154	29		15		20 18	6 00	26 18
Dexter	79	68	55		2	34	8			11 00	3 00	14 00
Douglas	49	37	31		1	37					8 13	
Dowagiac	251	213	202	2	8	42	5			8 80	8 71	17 51
Dryden	77	73	66	1	1	36					77	
Durand	60	39	36	1		39	5			15 38	7 32	22 70
Easton Rapids	142	135	133		4	34	3			11 00	2 32	13 32
East Lake	46	27	25	1		27				23 14	2 91	26 05
Ecorse	58	30	25	1		30				14 86	5 52	15 38
Edmore	40	35	30		1	35		14		11 69	1 73	13 42
Elk Rapids	144	98	81	1-8	3	27				15 00	3 88	18 88
Elm Hall	47	47	24	1		47	8			8 51	96	9 47
Elsie	48	46	22		1	46	1	12			1 80	
Escanaba	120	88	82		2	44		14		12 90	7 58	20 48
Essexville	47	41	24		1	41				9 75	1 95	11 70
Fayette	50	32	27	1		32	5			19 69	4 07	23 76
Fillmore Center	58	42	36	1		42		17		7 07	2 41	9 48
Fillmore No. 1.	63	57	83	1		57	9	18		5 53	69	6 22
Flint	948	500	490		13	37	13	14	10	10 94	11 29	22 23
Fort Gratiot	194	112	99		2	56					6 87	
Fowlerville	83	79	73		2 1-2	32	1	14		10 20	8 25	13 45
Galesburg	35	52	50		1 1-2	35	14	14		6 00	3 06	9 06
Gallen	49	46	40		1	46	1	15			1 63	
Gobleville	51	45	40		1	45	1	13		7 00	1 10	8 10
Grand Haven	418	296	277	1	6	42	5	14	7	10 62	3 55	14 17
Grand Ledge No. 9.	40	33	28		1	33					2 62	
Grand Ledge No. 11.	36		23		1			12				
Grand Rapids	4,143	2,442	2,299	1 3-8	65	37		13	5	15 69	3 87	19 56
Grayling	57	46	40		1	46		14		4 00	4 91	8 91
Greenland No. 2 fl.	24		18	1				10				
Greenville	273	193	180	2-7	5 1-2	35	2	14	7	11 29	3 06	14 35
Grindstone City	58	51	40		1	51		9	10		1 31	
Grosse Isle	32	20	20	1		20		16		27 50	4 00	31 50
Hadley	23	22	19		1	22					44	
Hamilton	46	30	28	1		30	4			12 00	2 43	14 43
Hancock	102	85	82	1-8	2	40	5	15			5 73	
Hanover	62	36	34	1	1	20	5	15		20 00	2 92	22 92
Hartford	98	72	65		2	36	8	14			2 02	
Hastings	242	183	178		4	48	2	14		7 87	3 31	11 18
Highland Station	71	51	36	1		51	2	16		8 82	38	9 20
Hillsdale	298	212	201	1 3-4	5	35	10	14	5	12 57	4 24	16 81
Holly	142	88	80	1-24	2	44		18			3 95	
Homer	87	74	69		2	87	12	14			2 63	
Horton	18	17	1	1		18	3			27 00	3 80	30 80
Houghton	126	96	92		4 1-2	24	3				12 75	
Howell	200	196	190	1-4	5	39					3 51	

TABLE XXII.—Continued.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Average No. of pupils to each teacher.	No. of non-resident pupils.	Average of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Hudson.....	113	97	88		2	48	5	18	4	\$10 03	\$1 15	\$11 18
Humboldt.....	53	84	80	1		34				18 75	7 32	26 07
Imlay City.....	190	87	80		2	48	7			9 44	2 80	12 24
Ionia.....	890	251	245	2	5	35		15			4 09	
Iron Mountain.....	244	155	148	1-4	3 5-6	40		15			7 17	
Ironwood.....	78	50	85	1	1	25					10 00	
Jackson No. 1.....	577	442	420	1-3	12 1-2	37	31			16 74	4 87	21 11
Jackson No. 17.....	338	265	252	1	8	80	15	14		14 00	2 40	16 40
Jamestown.....	40	85	30		1	35				9 00	2 42	11 42
Jennings.....	56	30	26	1		30				16 66	1 19	17 55
Jonesville.....	87	73	69		2	37	7	14	6	12 60	2 84	15 44
Kalamazoo.....	1,285	712	666	1-3	19	37	10	15	3	12 12	3 16	15 28
Laingsburg.....	68		40		1							
Lake Linden.....	238	203	191	1-4	6	33		15		16 04	18 75	34 79
Lakeview.....	122	69	62		2	34	3	13		10 23	2 81	12 54
L'Anse.....	53	47	41		1	47		13			5 51	
Lansing.....	806	568	525		14	42	10	15	2	11 79	9 29	21 07
Lawrence.....	50	40	36	1		40	4	15		7 50	1 41	8 91
Lawton.....	55	87	35		1 2-3	22	9	13			3 45	
Leslie.....	139	76	72		2	88	23	13			1 36	
Lowell.....	200	158	148		3 1-2	45	6	14	5	5 60	7 24	12 84
Luther.....	116	78	66		2	39		12		90	4 04	4 94
Lyons.....	89	50	47		1 1-2	42	4				2 92	
McBride's.....	60	54	35		1	54		12			1 68	
Mackinaw City.....	42	25	20	1		25	1			17 00	1 38	18 38
Mancelona.....	282	272	218		3	90	2	14		4 90	1 50	6 40
Manchester.....	104	80	75	1-3	2	40	2	14			1 27	
Manton.....	155	96	75		2	48					1 43	
Marcellus.....	62	33	29		1	33		12			1 46	
Marine City.....	90	52	46	4-9	2	26				12 80	6 07	18 87
Marlette.....	80	56	50		1	56					2 98	8 34
Marquette.....	404	809	288		6 1-5	44	3	13	6	14 37	4 48	18 85
Marshall.....	248	198	199	2-3	7 2-3	23		14	8	17 73	5 52	23 35
Martin.....	52	45	41		1	45	7	13		7 00	1 08	8 02
Mason.....	162				2						4 80	
Mayville.....	60	50	50	1		50		12			1 58	
Metamora.....	40	30	30		1	30	3				2 00	
Michiganme.....	76	57	52		1	29		15			3 41	26 21
Midland.....	201	129	125		3	28	3	16		22 80	9 95	
Milan.....	64	55	50		2	28	3	14			2 92	
Milford.....	141	109	97		2 1-2	44	12	14		6 41	2 73	9 14
Monroe.....	217	157	138	2-15	3 3-5	43	29	15	6	8 25	5 18	13 43
Montague.....	140	130	119		3	42	2				3 76	
Morley.....	64		42		1							
Mt. Clemens.....	226	164	159	1-3	4	41	10			9 90	10 50	20 40
Mount Morris.....	58	50	40	1		50				9 00	50	9 50
Mount Pleasant.....	138	81	74	1-7	3	30	18	15		11 85	6 74	18 59
Muskegon.....	1,411	893	817		33	27		12		14 80	5 75	20 05
Nashville.....	128	106	106		3	35					3 64	
National Mine.....	44	44	26	1		44					1 52	
Negaunee.....	302	180	163	1-3	4	45		14			8 22	
Newaygo.....	101	50	50	1-6	2	25					1 93	
New Hudson.....	26	24		1		24	6			16 88	1 63	18 51
New Troy.....	60	59	33	1		59				7 46	1 98	9 44
Niles.....	230	202	195		6	34	9			11 78	4 07	15 85
North Adams.....	43	38	34	1		38	3	12		7 10	3 18	10 28
North Branch.....	111	69	59		2	85	10	12		9 00	2 66	11 66
Norway.....	46	31	25		2	16		14	1	26 74	6 23	33 12
Okeemos.....	74	43		1		45	4			9 00	95	9 95
Ontonagon.....	95	66	57	3-5	2	25		13	3	21 33	7 90	29 23

TABLE XXII.—Continued.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Average No. of pupils to each teacher.	No. of non-resident pupils.	Average of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Orion	58	83	30	-----	1	83	8	-----	-----	\$14 50	\$2 01	\$16 51
Oscoda	117	62	51	-----	2	31	2	14	-----	-----	1 91	-----
Otisville	45	35	25	-----	1	35	2	-----	-----	6 29	79	7 08
Otsego	56	42	40	-----	1	42	14	-----	-----	-----	97	-----
Ovid	97	77	69	1-6	2	28	-----	14	-----	10 55	8 51	19 06
Palmyra	50	-----	45	1	-----	-----	-----	-----	-----	-----	50	-----
Palo	25	22	20	-----	1	22	2	-----	-----	-----	4 01	-----
Paris	37	80	27	1	-----	30	2	16	-----	13 66	49	14 15
Paw Paw	133	109	106	2-7	2 1-2	43	22	14	-----	10 74	1 15	11 89
Pentwater	71	61	58	1-12	1 1-4	48	2	-----	-----	-----	2 55	-----
Perry	55	54	49	1	-----	54	4	12	-----	-----	95	-----
Petoakey	227	191	164	-----	4 3-4	45	-----	-----	-----	-----	5 65	-----
Pierson	60	-----	-----	1	-----	-----	6	17	-----	-----	-----	-----
Pineckney	71	54	50	1	1	27	6	15	4	-----	5 98	-----
Pineconning	60	44	-----	-----	1	44	-----	-----	-----	-----	1 82	-----
Pinnebog	52	52	40	1	-----	52	6	13	-----	10 58	64	12 22
Plymouth	78	74	62	1-8	2	37	17	15	-----	10 37	2 52	13 39
Pontiac	355	296	288	1 1-2	7	37	18	14	7	13 73	2 79	16 52
Port Austin	52	49	46	-----	1	49	-----	13	8	6 00	2 60	8 60
Port Hope	40	52	30	-----	1	32	2	13	-----	-----	1 15	-----
Port Huron	718	462	429	-----	13 2-3	34	7	15	-----	13 07	6 87	19 94
Portland	146	117	117	-----	8	30	-----	14	-----	-----	7 83	-----
Pottersville	60	46	42	1	-----	46	-----	12	-----	6 70	1 92	8 62
Quincy	59	74	68	-----	2	37	7	-----	-----	8 06	3 60	11 66
Savanna	54	25	23	1	-----	25	3	15	10	17 65	1 25	18 90
Reading	93	85	77	-----	2	42	-----	-----	-----	-----	2 54	-----
Reed City	143	110	95	-----	2 1-3	36	2	15	-----	7 77	1 15	8 92
Reese	85	60	46	1	-----	60	6	12	-----	8 75	71	9 46
Republic	316	200	180	1-4	3	66	-----	11	-----	-----	13 63	-----
Richland	42	30	24	-----	1	30	2	18	-----	-----	3 03	-----
Richmond	42	40	35	-----	1	40	5	13	-----	-----	1 83	-----
Rogers City	72	66	48	1	-----	66	-----	-----	-----	6 82	8 08	14 90
Romeo	132	74	72	-----	1 1-2	49	2	13	9	7 77	2 71	10 48
Royal Oak	40	40	38	1	-----	40	10	12	-----	10 00	1 93	11 98
Saginaw, west side.	832	496	484	2	16	28	17	14	8	16 00	7 69	23 69
St. Charles	74	48	32	-----	1	48	3	13	-----	7 29	80	8 09
St. Clair	170	138	129	1	2 19-70	43	4	14	-----	10 47	5 65	16 12
St. Johns	238	173	142	1	-----	43	28	16	8	11 28	8 78	15 04
St. Joseph	340	-----	168	-----	5	3	-----	-----	-----	-----	-----	-----
St. Louis	306	202	179	1	5	34	11	-----	-----	7 30	2 50	10 80
Saline	92	82	73	-----	2	41	16	-----	-----	11 05	3 26	14 31
Sand Beach	128	120	115	-----	2	60	-----	-----	-----	7 91	2 75	10 66
Saranac	109	73	70	-----	2	86	12	13	6	8 22	3 68	11 90
Saugatnick	138	84	76	-----	2	42	2	13	-----	6 53	2 67	9 20
Sault Ste. Marie	238	200	168	1-4	4	45	3	14	-----	2 29	3 40	5 69
Schoolcraft	93	76	70	-----	2	38	8	13	6	-----	3 55	-----
Sheridan	75	48	31	-----	1	48	2	-----	-----	7 98	1 70	9 68
Sherwood	52	51	28	1	-----	25	6	-----	-----	-----	1 75	-----
South Lyon	80	70	53	-----	2	35	9	14	-----	-----	2 07	-----
South Frankfort	88	27	26	-----	1	27	-----	11	-----	10 60	2 76	13 66
Spaulding & Powers	46	34	30	1	-----	34	4	-----	-----	16 17	4 91	21 06
Sparta	43	39	35	-----	1	39	2	14	-----	7 69	97	8 66
Spring Lake	190	135	129	1-3	8	33	2	13	-----	9 90	2 17	12 07
Springport	39	28	26	-----	1	28	-----	-----	-----	-----	1 80	-----
Standish	108	75	47	1	-----	75	-----	-----	-----	6 66	71	7 37
Stanton	80	57	51	-----	2	28	5	13	6	-----	4 89	-----
Stanwood	46	33	31	-----	1	33	-----	-----	-----	9 50	1 25	10 75
Sterling No. 4	49	39	34	1	-----	39	2	13	-----	12 82	1 70	14 52
Stockbridge	47	33	30	-----	1	38	3	-----	-----	-----	2 04	-----
Sturgis	212	175	162	-----	4	44	14	-----	-----	-----	3 40	-----

TABLE XXII.—Continued.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Average No. of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Sutton's Bay	40	30	36	1	—	30	—	14	—	\$12 82	\$1 38	\$14 20
Tawas City	75	74	60	—	2	37	—	—	—	—	1 57	—
Tecumseh	147	112	110	—	4	28	7	14	—	13 74	3 32	16 56
Tekonsha	48	35	28	—	1	35	—	—	—	—	1 51	—
Thornville	38	26	21	1	—	26	4	14	—	—	8 14	—
Three Rivers	245	215	204	—	7	30	8	13	7	—	4 37	—
Traverse City	206	179	146	1-3	4	45	17	—	—	—	6 95	—
Trenton	67	41	41	—	1	41	—	—	—	7 31	2 62	9 93
Trufant	56	36	19	—	1	36	—	—	—	6 97	1 40	8 37
Union City	144	130	124	—	3	46	—	—	—	—	8 11	—
Unionville	46	—	31	—	1	—	—	—	—	—	2 68	—
Utica	25	21	20	—	1	21	—	—	—	—	1 89	—
Vandalia	37	35	30	—	2	17	—	—	—	—	5 31	—
Vassar	110	88	75	—	2	41	4	14	6	10 53	1 14	12 84
Vriesland	54	48	32	1	—	48	—	16	—	7 92	—	9 06
Vermontville	57	48	40	—	1	48	2	14	—	7 06	4 50	11 55
Walkertown	62	49	47	—	1	49	—	—	—	6 73	6 79	13 52
Walton No. 1	56	42	41	—	1	42	1	12	6	—	2 70	—
Wayland	31	—	24	1-4	1	—	—	13	—	—	—	—
Wayne	128	96	74	—	2	43	3	—	—	7 80	1 33	9 63
West Bay City	849	543	496	2	15	32	—	—	—	—	6 47	—
Whitehall	169	135	129	—	8 1-2	39	—	13	—	10 50	4 33	14 32
White Pigeon	37	33	31	—	1	38	3	12	—	10 00	2 25	12 25
Williamston	171	104	92	1	2	52	—	—	—	5 24	6 87	12 11
Woodland	55	55	30	1	—	55	—	—	—	8 15	1 90	10 06
Yale	120	100	85	—	2	50	—	—	—	—	1 54	—
Zeeland	105	80	72	1	1	40	—	14	—	10 00	2 53	12 53

TABLE XXIII.

Statistics of the Primary Department of Two Hundred and Fifty-four Graded School Districts, Compiled from the Reports of Superintendents and Principals for the School Year 1889-90.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Average number of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Ada.....	61	83	80	1	1	33	9	6		\$1 48		
Addison.....	58	48	44	1	1	45				2 18		23 68
Adrian.....	798	567	524	1-12	14	40	4	11		10 00	5 67	15 67
Albion.....	35	28	25	1	1	23				4 07	2 78	6 80
Albion.....	438	323	312	1-3	6	40	9	10			4 22	
Allegan.....	421	295	262	1-4	7	42	27	10			5 00	
Allouez.....	54	31	29	1	1	31				10 18	1 74	11 90
Alpena.....	1,267	765	697		19	40		10		9 13	9 13	18 25
Ann Arbor.....	850	673	644	1	18	37	50	6		11 33	4 33	15 66
Athens.....	64	56	41		1	56		11			94	
Atlantic Mine.....	125	103	90		1	103	8			4 76	1 89	9 65
Attica.....	93	86	48		1	86					1 43	
Au Sable.....	390	294	240	1	6	49	2	10	6	12 44	3 06	15 50
Bad Axe.....	102	90	70		1	90					2 75	
Bath.....	67	40	40		1	40					2 52	
Bay City.....	4,165	2,078	1,964	2	50	40	4	11	2	9 45	4 55	14 00
Belding.....	204	140	140		3	46	1				5 93	
Belle Isle.....	60	42	40		1	42				6 00	2 35	8 35
Berlin.....	40	40	35		1	40	2			6 50	1 43	7 93
Big Rapids.....	833	615	590		14	44	5	10		10 00	2 00	12 00
Birmingham.....	139	131	59	1 1-16	2	44					1 98	
Blissfield, No. 1.....	62	37	36		1	37				7 02	2 23	9 25
Blissfield, No. 2.....	82	58	50		1	58				8 62	3 67	12 29
Bozette.....	76	53	40		1	53					3 21	
Breckenridge.....	60	60	50		1	60				4 50	55	5 05
Brighton.....	99	69	65		2	34	8	10		7 54	1 53	9 06
Bronson.....	175	140	122		3	47		11			5 96	
Brooklyn.....	76				2						1 73	
Buchanan.....	249	177	158		4	44	4			9 00	2 58	11 58
Burnip's Corners.....	55	45	38		1	45	1	11		5 00	1 27	6 27
Byron Center.....	58	47	28		1	47	1			4 98	79	5 77
Byron.....	47	29	22		1	29	3				2 03	
Cadillac.....	808	515	485	1-3	14	37		9	9	14 35	4 42	18 77
Calumet.....	2,093	1,445	1,377	2	32	41	2				4 90	
Canonsburg.....	64	45	31		1	45		9		4 80	1 51	6 31
Cape.....	76	59	50		1	59	2				2 89	
Caro.....	388	288	249		5	57	13	11	9		4 77	
Carrollton, No. 1.....	254	137	117		3	45				7 30	2 04	9 34
Carrollton, No. 2.....	66	66	33		1	66				5 30	3 57	8 87
Carsonville.....	104	104	55		1	104				1 92	1 12	3 04
Cassville.....	98	95	78		1	96		11		3 69	1 55	5 24
Clayton.....	45	35	35		4	35				7 71	3 06	10 77
Cedar Springs.....	212	170	108		2	85	2	9		4 00	2 90	6 90
Central Mine.....	50	41	35		1	41					3 94	
Champion.....	408	379	301	1 1-4	4	62					7 54	
Cheboygan.....	808	483	409		11	39		10			8 24	
Chelsea.....	196	172	165		4	43	2	10			2 59	
Clare.....	243	183	148		8	61		8		4 87	2 65	7 02
Clarkston.....	57	48	35		1	48	2	9			2 48	

TABLE XXIII.—Continued.

Districts.	Enrollment in department.	Average number being longed.	Average daily attendance.	No. of men teachers.	No. of women teachers.	Average number of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Coldwater	609	453	430	7-12	10 5-24	49	—	11	2	\$8 42	\$6 72	\$15 14
Columbiaville	59	59	35	—	1	59	—	—	—	—	2 27	—
Constantine	183	116	99	—	2	58	—	7	8	—	3 11	—
Coopersville	105	75	70	—	2	87	—	10	—	—	81	—
Coral	86	69	43	—	1	69	—	—	—	5 07	1 35	6 42
Croswell	108	98	83	—	1	98	—	—	—	—	89	—
Custer	64	45	80	—	1	45	—	11	—	7 00	1 17	8 17
Danaville	40	26	22	—	1	28	—	9	—	—	5 95	—
Davison	79	45	37	—	1	45	—	—	—	7 68	2 16	9 84
Dearborn	126	—	66	—	1	—	—	—	—	—	—	—
Deerfield	97	—	—	—	2	—	—	—	—	—	1 00	—
Delray	196	160	108	—	2	30	—	11	—	5 00	14 56	19 56
Detroit	17,569	13,134	12,295	—	293	46	—	10	6	12 72	6 00	18 72
Dexter	123	88	78	—	3	30	—	—	—	9 00	3 00	12 00
Douglas	62	40	87	—	1	40	—	—	—	—	3 13	—
Dowagiac	323	215	199	—	5	43	—	—	—	8 96	8 71	17 67
Dryden	92	74	65	—	1	74	—	—	—	—	77	—
Durand	65	43	40	—	1	43	—	—	—	6 05	7 32	13 37
Eaton Rapids	207	195	192	—	5	89	—	—	—	9 54	3 32	11 86
East Lake	221	147	133	—	2	73	1	11	6	7 00	2 91	9 91
Ecorse	184	105	84	—	2	52	—	10	4	8 95	52	4 47
Edmore	100	75	65	—	2	34	—	10	—	11 69	1 73	13 42
Elk Rapids	200	142	136	1-8	4	35	—	—	—	12 00	3 88	15 88
Elm Hall	58	58	—	—	1	58	—	9	—	3 86	96	4 82
Elsie	119	101	84	—	2	50	—	—	—	—	1 80	—
Escanaba	781	403	376	—	8	50	—	11	—	9 06	7 68	16 64
Eseesville	183	119	100	—	2	89	—	—	—	3 86	1 95	5 81
Fayette	73	53	29	—	1	53	4	—	—	6 60	4 07	10 67
Fillmore Center	54	40	30	—	1	40	—	—	—	4 95	2 41	7 36
Fillmore, No. 1	54	45	30	—	1	45	—	10	—	4 00	69	4 69
Flint	1,343	706	679	—	18	88	4	10	10	9 34	11 29	20 63
Fort Gratiot	587	308	273	—	4	77	—	—	—	—	6 87	—
Fowlerville	85	80	72	—	2 1-2	82	—	10	—	9 20	3 25	12 45
Galesburg	85	62	58	—	1 1-2	40	6	10	—	5 00	3 06	8 06
Gallen	74	70	64	—	1	70	—	10	—	—	1 63	—
Gobleville	82	70	60	—	1	70	—	—	—	4 00	80	4 80
Grand Haven	937	688	646	1	14	46	5	11	8	9 22	3 55	12 77
Grand Ledge, No. 9	138	128	110	—	2	64	—	—	—	—	2 62	—
Grand Ledge, No. 11	125	—	91	—	2	—	—	9	—	—	—	—
Grand Rapids	9,742	4,985	4,632	1 1-3	187 1-2	86	—	10	7	13 47	3 87	17 34
Grayling	159	112	100	—	2	56	—	10	—	4 71	4 91	9 62
Greenland, No. 2, fri.	24	—	16	—	1	—	—	—	—	—	—	—
Greenville	499	328	292	2-7	6 5-6	48	1	9	6	8 41	3 06	11 47
Grindstone City	101	83	57	—	1	83	—	—	—	—	1 31	—
Grosse Ile	43	30	30	—	1	30	—	10	—	8 38	4 00	12 38
Hadley	29	29	26	—	1	29	—	—	—	—	44	—
Hamilton	59	45	84	—	1	45	4	—	—	4 00	2 43	6 43
Hancock	359	245	231	1-8	7	35	—	11	10	—	5 73	—
Hanover	70	56	51	—	1	56	—	—	—	17 00	2 92	19 92
Hartford	157	119	108	—	2	59	1	9	—	—	2 02	—
Hastings	441	288	280	—	7	41	2	10	—	8 12	2 10	10 22
Highland Station	75	50	40	—	1	50	—	11	—	5 20	88	5 58
Hillsdale	454	297	279	3-4	8	37	1	10	11	10 69	4 24	14 93
Holly	205	129	126	1-24	3	48	—	8	—	—	3 95	—
Homer	153	129	85	—	2	64	—	10	—	—	2 63	—
Horton	41	24	20	—	2	12	3	9	—	19 50	3 80	23 30
Houghton	302	243	226	—	6	40	—	—	—	—	12 75	—
Howell	354	313	310	1-4	7	30	—	—	—	—	8 51	—
Hudson	146	121	110	—	3	40	2	9	5	9 51	1 15	10 66
Humboldt	51	46	34	—	1	46	—	—	—	7 07	7 32	14 39

TABLE XXIII.—Continued.

Districts.	Enrollment in department.	Average No. belonging.	Average daily attendance.	Number of men teachers.	Number of women teachers.	Average number of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Imlay City.....	363	174	160	.....	4	43	1	.....	.....	\$7 56	\$2 80	\$10 36
Ionia.....	804	428	411	.....	12	35	.....	11	5	.....	4 09	.....
Iron Mountain.....	1,325	630	565	1-4	12 1-2	50	.....	11	.....	.....	7 17	.....
Ironwood.....	825	500	436	.....	8	62	.....	.....	.....	.....	10 00	.....
Jackson No. 1.....	1,511	906	854	1-3	23	39	13	.....	.....	12 73	4 37	17 10
Jackson No. 17.....	1,117	723	641	.....	13	40	20	9	.....	6 77	2 40	9 17
Jamestown.....	50	40	40	.....	1	40	.....	9	.....	5 40	2 42	7 82
Jennings.....	70	42	39	.....	1	42	.....	.....	.....	7 14	1 19	8 33
Jonesville.....	167	113	108	.....	2	57	8	10	.....	9 86	2 84	12 70
Kalamazoo.....	2,894	1,634	1,545	1-3	40	41	6	11	5	9 35	3 16	12 51
Laingsburg.....	77	.....	44	.....	1	.....	.....	.....	.....	.....	.....	.....
Lake Linden.....	693	490	477	1-4	11	44	.....	10	6	9 58	18 75	28 33
Lakeview.....	167	180	107	.....	2	65	.....	9	.....	5 43	2 31	7 74
L'Anse.....	92	81	76	.....	2	40	.....	9	.....	.....	5 51	.....
Lansing.....	1,523	924	846	.....	22	42	4	10	.....	6 50	9 23	15 78
Lawrence.....	88	55	51	.....	1	55	.....	9	6	4 58	1 41	5 99
Lawton.....	134	71	65	.....	1 2-3	43	6	10	.....	.....	3 46	.....
Leslie.....	204	143	125	.....	3	47	.....	9	.....	.....	1 36	.....
Lowell.....	254	180	162	.....	5 1-2	33	.....	10	6	5 65	7 24	12 29
Luther.....	207	108	101	.....	2	54	.....	8	.....	80	4 04	4 84
Lyons.....	60	44	40	.....	1 1-2	35	3	.....	.....	.....	2 92	.....
McBride's.....	60	55	36	.....	1	35	.....	.....	.....	.....	1 93	.....
Mackinaw City.....	47	35	32	.....	1	55	7	.....	.....	9 78	1 88	11 11
Mancelona.....	193	198	141	.....	3	64	.....	9	.....	4 82	1 50	6 82
Manchester.....	202	170	151	1-8	4	43	21	9	.....	.....	1 27	.....
Manton.....	146	94	72	.....	2	47	.....	.....	.....	.....	1 43	.....
Marcellus.....	80	60	55	.....	1	60	2	8	.....	.....	1 46	.....
Marine City.....	427	298	255	1-3	6	49	.....	.....	.....	6 70	6 07	12 77
Marlette.....	73	56	49	.....	1	56	1	.....	.....	5 35	2 98	8 33
Marquette.....	979	632	634	.....	14 1-2	47	.....	8	6	10 35	4 48	14 83
Marshall.....	442	337	318	1-2	10 1-3	33	.....	.....	.....	10 96	5 62	16 58
Martin.....	65	42	39	.....	1	42	8	9	.....	4 15	1 02	5 17
Mason.....	293	.....	.....	.....	5	.....	.....	.....	.....	.....	4 30	.....
Mayville.....	85	70	70	.....	2	35	29	8	.....	.....	1 53	.....
Metamora.....	50	40	35	.....	1	40	3	.....	.....	.....	2 00	.....
Michigamme.....	257	164	143	.....	3	55	.....	11	.....	7 62	3 41	11 08
Midland.....	415	275	255	.....	7	36	4	11	.....	.....	9 95	.....
Milan.....	135	128	115	.....	2	64	.....	9	.....	.....	2 92	.....
Millford.....	133	100	90	.....	3	33	4	10	.....	7 77	2 73	10 50
Monroe.....	364	280	258	1 2-15	5	51	8	12	6	6 90	5 18	12 08
Montague.....	214	204	181	1	3	51	.....	.....	.....	.....	3 76	.....
Morley.....	99	.....	52	.....	1	.....	.....	.....	.....	.....	.....	.....
Mount Clemens.....	653	355	349	1-3	8	44	.....	.....	.....	6 25	10 50	16 75
Mount Morris.....	60	30	48	.....	1	50	.....	.....	.....	5 00	50	5 50
Mount Pleasant.....	490	271	243	1-7	6	45	.....	10	.....	8 47	6 74	15 21
Muskegon.....	3,559	2,479	2,289	.....	64	40	.....	7	.....	11 07	4 30	15 37
Nashville.....	120	100	100	.....	2	50	.....	.....	.....	.....	3 64	.....
National Mine.....	97	97	52	.....	1	97	.....	.....	.....	.....	1 52	.....
Negaunee.....	733	452	422	1-3	10	47	.....	10	.....	.....	8 22	.....
Newaygo.....	180	165	158	1-6	2	82	.....	.....	.....	.....	1 93	.....
New Hudson.....	26	25	.....	.....	1	25	.....	.....	.....	4 80	1 63	6 43
New Troy.....	48	43	26	.....	1	48	.....	.....	.....	5 21	1 98	7 19
Niles.....	530	398	380	.....	9	44	21	.....	.....	11 62	4 07	15 69
North Adams.....	62	51	34	.....	1	51	2	9	.....	5 29	3 13	8 42
North Branch.....	135	112	100	.....	2	56	.....	9	.....	9 00	2 66	11 66
Norway.....	309	179	162	.....	4	45	.....	8	9	15 05	6 33	21 43
Okemos.....	61	40	.....	.....	2	20	.....	10	.....	8 12	95	9 07
Ontonagon.....	190	126	108	1	3	31	4	10	7	14 96	7 90	22 86
Orion.....	88	60	55	.....	1	60	.....	10	6	5 33	2 01	7 34

TABLE XXIII.—Continued.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	Number of men teachers.	Number of women teachers.	Average number of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Oscoda.....	563	331	264	-----	7	47	-----	10	-----	-----	\$1 91	-----
Otisville.....	94	60	44	-----	1	60	-----	-----	-----	\$3 66	79	\$4 45
Otsego.....	311	201	182	-----	4	50	-----	10	-----	-----	97	-----
Ovid.....	228	158	147	1-6	4	39	-----	9	-----	9 98	8 51	18 49
Palmyra.....	55	-----	50	-----	1	-----	-----	-----	-----	-----	50	-----
Palo.....	40	35	30	-----	1	35	1	-----	-----	-----	4 01	-----
Paris.....	40	40	30	-----	1	40	-----	-----	-----	5 62	49	6 11
Paw Paw.....	156	118	106	1-7	2 1-2	45	-----	9	6	8 88	1 15	10 03
Pentwater.....	279	201	190	1-12	3	67	4	-----	-----	-----	2 55	-----
Perry.....	54	49	39	-----	1	49	1	10	6	-----	98	-----
Petoakey.....	264	204	176	-----	5 1-2	40	-----	-----	-----	-----	5 65	-----
Piercen.....	87	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----
Pinckney.....	92	65	58	-----	2	32	-----	11	-----	-----	5 98	-----
Pinconning.....	198	100	-----	-----	2	50	-----	-----	-----	-----	1 82	-----
Pinnebog.....	75	74	58	-----	1	74	-----	10	-----	3 38	64	4 02
Plymouth.....	193	149	122	1-8	3	49	-----	12	-----	7 13	2 52	9 65
Pontiac.....	696	468	452	1-4	10	46	5	11	5	9 34	2 79	12 13
Port Austin.....	82	76	72	-----	1	76	-----	10	-----	4 60	2 60	7 20
Port Hope.....	72	60	44	-----	1	60	4	10	-----	-----	1 15	-----
Port Huron.....	1,784	1,020	927	-----	23	44	1	11	-----	8 40	6 87	15 27
Portland.....	215	163	148	-----	4	41	-----	10	-----	-----	7 83	-----
Pottersville.....	72	46	43	-----	1	46	-----	10	-----	5 87	1 92	7 79
Quincy.....	169	120	110	-----	8	40	5	-----	-----	7 52	3 60	11 12
Ravenna.....	77	45	48	-----	1	45	-----	11	4	6 00	1 25	7 25
Reading.....	89	82	75	-----	2	41	-----	-----	-----	-----	2 54	-----
Reed City.....	306	250	220	1	4	50	-----	11	-----	7 82	1 15	8 47
Reese.....	106	80	37	-----	1	80	-----	-----	-----	3 75	71	4 46
Republic.....	273	225	200	1-4	4	56	-----	7	-----	-----	13 63	-----
Richland.....	64	35	34	-----	1	35	3	9	-----	-----	3 08	-----
Richmond.....	119	110	45	-----	2	55	5	8	-----	-----	1 88	-----
Rogers City.....	56	51	34	-----	1	51	-----	10	-----	5 29	8 08	13 37
Romeo.....	335	198	182	-----	4	48	-----	10	3	6 08	2 71	8 79
Royal Oak.....	86	86	73	-----	1	86	5	15	-----	3 49	1 98	5 47
Saginaw, West Side.....	2,838	1,394	1,385	2	38	35	5	10	3	9 81	7 69	17 00
St. Charles.....	167	93	84	-----	2	47	-----	9	-----	7 53	80	8 33
St. Clair.....	444	308	281	-----	6 3-10	48	-----	10	-----	8 57	5 65	14 22
St. Johns.....	538	338	311	-----	7	48	4	10	9	8 51	8 76	12 27
St. Joseph.....	442	-----	375	1	7	-----	2	-----	-----	-----	-----	-----
St. Louis.....	400	246	205	-----	5	49	-----	-----	-----	8 65	2 50	11 15
Saline.....	125	101	97	-----	2	50	1	-----	-----	9 80	33	9 93
Sand Beach.....	157	151	147	-----	2	75	-----	-----	-----	6 80	2 75	9 55
Saranac.....	144	98	84	-----	2	46	4	9	6	7 52	8 68	11 20
Saugatuck.....	153	94	86	-----	2	47	2	10	-----	5 88	2 67	8 55
Sault Ste. Marie.....	828	502	390	1-4	10	49	-----	10	-----	2 24	3 40	5 64
Schoolcraft.....	122	90	78	-----	2	45	2	9	-----	-----	8 55	-----
Sheridan.....	58	49	31	-----	1	49	-----	-----	-----	6 96	1 70	8 65
Sherwood.....	51	51	27	-----	1	51	-----	-----	-----	-----	1 75	-----
South Lyon.....	67	55	47	-----	1	55	3	10	-----	-----	2 07	-----
South Frankfort.....	69	49	45	-----	1	49	2	10	-----	7 11	2 76	9 87
Spalding & Powers.....	93	48	35	-----	1	48	-----	-----	-----	7 29	4 91	12 20
Sparta.....	131	118	118	-----	2	59	-----	10	-----	5 09	97	6 06
Spring Lake.....	296	156	149	1-3	4	39	1	9	-----	9 75	3 17	11 92
Springport.....	71	62	57	-----	1	62	-----	-----	-----	-----	1 80	-----
Standish.....	133	65	51	-----	1	65	3	-----	-----	5 38	71	6 09
Stanton.....	355	229	219	-----	6	38	-----	10	6	-----	4 89	-----
Stanwood.....	50	31	31	-----	1	31	-----	-----	-----	8 10	1 25	9 35
Sterling No. 4.....	48	28	26	-----	1	28	-----	9	-----	3 57	1 70	5 27
Stockbridge.....	58	44	37	-----	1	48	2	-----	-----	-----	2 04	-----
Sturgis.....	311	222	192	-----	4	55	2	-----	-----	-----	3 40	-----

PRIMARY SCHOOL STATISTICS.

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TABLE XXIII.—Continued.

Districts.	Enrollment in department.	Average number belonging.	Average daily attendance.	Number of men teachers.	Number of women teachers.	Average number of pupils to each teacher.	No. of non-resident pupils.	Av. age of class promoted.		Cost per capita for instruction.	Cost per capita for incidentals.	Total cost per capita.
								Years.	Months.			
Sutton's Bay.....	75	70	70	—	1	70	6	9	—	\$5 00	\$1 38	\$6 38
Tawas City.....	125	100	100	—	2	50	—	—	—	—	1 57	—
Tecumseh.....	265	213	205	—	6	33	2	10	—	8 62	3 82	12 44
Tekonsha.....	76	60	50	—	1	60	—	—	—	—	1 51	—
Thornville.....	49	38	29	—	1	35	2	11	—	—	8 14	—
Three Rivers.....	405	299	283	—	7	43	1	8	4	—	4 37	—
Traverse City.....	601	413	412	1-3	11	38	3	—	—	—	6 95	—
Trenton.....	194	129	99	—	3	64	—	—	—	3 49	2 62	6 11
Trufant.....	68	50	30	—	1	50	—	—	—	6 00	1 40	7 40
Union City.....	153	147	128	—	3	49	—	—	—	—	3 11	—
Unionville.....	62	—	34	1	—	—	7	—	—	—	—	—
Utica.....	151	125	120	1	2	45	—	—	—	—	2 58	—
Vandalia.....	60	55	40	—	1	55	—	—	—	—	1 89	—
Vassar.....	343	215	195	—	5	43	1	11	—	8 54	3 31	11 85
Vriesland.....	52	52	36	—	1	52	—	10	—	8 14	1 14	4 28
Vermontville.....	119	102	90	—	2	51	1	11	—	6 37	4 50	10 87
Walkertown.....	69	69	61	—	1	69	—	—	—	3 91	6 79	10 70
Walton No. 1.....	103	69	63	—	2	84	1	9	4	—	2 70	—
Wayland.....	43	—	32	1-4	1	—	—	9	—	—	—	—
Wayne.....	136	140	110	—	2	70	4	—	—	5 30	1 83	7 13
West Bay City.....	2,729	1,352	1,199	—	30	45	—	—	—	—	6 47	—
Whitehall.....	284	214	200	—	4	54	—	11	—	7 40	4 32	11 72
White Pigeon.....	162	143	140	—	3	49	3	10	—	6 23	2 25	8 48
Williamston.....	205	116	107	—	2	58	—	—	—	5 52	6 87	12 39
Woodland.....	65	65	45	1	—	65	—	—	—	4 62	1 90	6 52
Yale.....	131	131	100	—	2	65	1	—	—	—	1 54	—
Zeeland.....	219	189	170	—	3	63	—	10	—	4 14	2 53	6 67

RECEIPTS AND EXPENDITURES AT INSTITUTES.

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Jackson	March 31-April 5.	443 49	307 00	199 66	75 33	443 49
Jackson	Aug. 25-29	119 30	6 30	6 30	23 00	119 30
Kalamazoo	Aug. 11-15	164 80	83 14	83 14	21 65	164 80
Kalamazoo	Aug. 28-30	70 00	90 00	28 50	11 50	130 00
Kalkaska						
Kent	July 14-23	353 95	175 00	83 30	42 75	353 95
Kent	Aug. 11-23	324 00	235 00	72 06	37 06	324 00
L'Angeles	Aug. 18-23	274 85	183 00	81 66	38 30	274 85
L'Angeles	Aug. 25-28	17 00	33 65	35 35	8 00	17 00
Lucas	Newberry					
Macomb	Aug. 18-22	102 71	90 00	21 01	15 40	128 41
Manitowish	March 31-April 5	90 00	90 00	38 75		128 75
Marquette	Aug. 25-29	84 50	64 89	79 61		144 50
Mason	Dec. 13-19	72 95	90 00	23 95	10 00	123 95
Meosota						
Menominee	Aug. 25-28	124 58	80 00	13 28	26 30	124 58
Iron	Aug. 18-23	63 00	63 00	75 75	8 25	149 00
Midland	July 28-Aug. 1	72 00	90 00	24 60	15 23	129 85
Misaukee						
Monroe	Aug. 25-28	39 00	78 13	20 88		99 00
Montcalm	Aug. 11-15	145 95	90 00	26 75	29 20	145 95
Montmorency	Aug. 18-23	211 00	150 85	46 05	14 60	211 00
	May 12-16	18 50	58 80	15 50	4 30	78 50
Muskegon						
Newaygo	July 7-11	100 50	130 00	13 62	16 88	190 50
Oakland	Aug. 18-23	78 50	90 00	34 80	13 70	138 50
Oceana	Aug. 18-23	313 40	215 00	86 70	17 70	313 40
	Aug. 11-15	110 50	90 00	44 50	16 60	150 50
Oscoda						
Oscoda	Aug. 25-28	90 00	90 00	31 25	18 00	139 25
Oscoda	May 19-23	48 50	70 00	26 27	10 00	106 27
Otego	May 12-16	43 50	70 00	17 30	13 90	101 20
Ottawa	March 24-28	164 75	90 00	54 75	20 00	164 75
Saginaw						
St. Clair	Aug. 25-28	215 15	125 00	38 90	55 25	215 15
St. Joseph	July 7-Aug. 1	331 43	252 08	104 40	25 00	331 43
Sanilac	Aug. 18-23	233 90	105 00	69 10	29 80	293 90
	March 10-14	167 45	90 00	43 35	29 10	167 45
Shiawassee						
Shiawassee	Aug. 4-15	199 57	130 83	47 97	11 07	199 57
Tuacola	July 14-Aug. 6	308 30	238 00	65 30		303 30
Van Buren	Aug. 18-23	228 05	149 00	73 15	13 90	228 05
Washtenaw						
Wayne	Aug. 11-15	125 36	90 00	15 00	20 35	125 36
Wexford	March 31-April 5	316 19	170 00	120 59	25 60	316 19
	March 31-April 4	44 50	54 00	45 50	2 00	104 50

1Institutes continued two weeks.

2Institutes continued three weeks.

3Institutes continued four weeks.

4Institutes continued eight days.

LOCAL COMMITTEES, CONDUCTORS, ETC., AT INSTITUTES. xcvii

Edinboro	Silas Brotherton	H. R. Pattengill	Ashley Clapp	Endora Hallmann	K. A. Carpenter.
Elmhurst	Geo. R. Cotton	C. W. Putnam	J. O. Chubbald	A. H. Smith	J. F. O'Keefe.
Kent	Geo. R. Cotton	R. W. Putnam	C. R. Dooley	Ella Irish	
Leawood	E. G. Walker	Delos Hall	J. O. Reed	Ella A. Ludwig.	
Livingston	S. D. Williams	S. G. Burkhead	S. D. Williams		
Luce	C. A. Dean	H. R. Gass	A. S. Whitney	Henry A. Ford.	
Macomb	I. N. Savage	Andin George	S. T. Morris		
Manistee	A. W. Farr	W. N. Ferris	Mande Cannell		
Marquette	H. Oloott	A. E. Haynes	J. R. Miller		
Mason	B. S. Mills	C. L. Bemis	P. M. Brown		
Meosta	S. W. Baker	J. Montgomery	S. T. Morris		
Menominee	{ E. F. Abernathy	H. R. Pattengill	Elhona Cuddebeck		
Iron	W. W. Allen	C. B. Hall	N. H. Hayden		
Midland	Georgia Roche	E. P. Church	C. B. Hall	H. A. Ford.	
Missaukee	J. W. Billmire	J. G. Plowman	H. R. Gass	J. J. Bronson	H. A. Lewis.
Monroe	W. A. Jordan	W. N. Ferris	Jas. Francis		
Montcalm	Jas. Francis	J. B. Estabrook	J. B. Estabrook		
Montmorency	C. M. McLean	C. M. McLean	N. H. Hayden		
Muskegon	H. S. Garrison	J. N. McCall			
Newaygo	W. P. Rankin	H. M. Enos	Geo. A. Parker	H. R. Pattengill	{ C. W. Souby.
Oakland	D. E. McClure	Geo. A. Parker	F. O. Wickham		{ H. A. Ford.
Oceana	A. E. Perrin	J. W. Humphrey	H. T. Bloodgett.		
Oscoda	J. J. McCarthy	J. B. Estabrook	Miss F. M. Towle.		
Otsego	Henry Whiteley	H. C. Rankin	C. E. Smith	C. C. Lillie.	
Ottawa	J. W. Humphrey	B. A. Hinesdale	J. O. Reed	J. A. F. Strieter.	
Sebewacon	M. T. Dodge	Delos Hall	C. E. Smith	E. T. Law.	
St. Clair	Jennie Stewart	J. P. O'Keefe	Sheridan Gibson	A. Saterlee.	
St. Joseph	O. P. Plowman	H. King	C. L. Bemis	W. J. McKone.	
Sanilac	O. P. Knapp	W. N. Ferris	Ruth Hopkin.		
Shiawassee	J. N. McBride	E. C. Thompson	Emily Fuller		
Tuscola	Emily Fuller	H. C. Rankin	Chas. McKenny	Ed E. Gordon	Mand Cannell.
Van Buren	W. V. Sage	C. F. Bellows	John Goodson.	W. F. Lyon	B. A. Hinesdale.
Washtenaw	Arthur Brown	B. A. Hinesdale	{ E. E. White	{ Henry R. Sanford.	Fred W. Moe.
Wayne	C. B. Hall	C. B. Hall	{ A. E. Frye.		
Wexford	R. D. Frederick	R. W. Putnam	Jerome Fravis.		

TABLE XXVI.

Enrollment at Teachers' Institutes for the Calendar Year 1890.

Counties.	Number of teachers required to supply the schools.	Number enrolled.			Kind and grades of certificates held by members.							No. without expe- rience in teaching.	No. having received Normal instruction.	Average attendance each half day.
		Men.	Women.	Total.	State.	Normal.	First.	Second.	Third.	Special.				
Allegan	238	27	56	83	1	2	2	13	26	1	88	10	52.	
"	288	21	77	98	2	4	8	22	48		18	11	45.6	
Alpena	72	4	49	53					36	1	16	1	41.8	
Antrim	85	4	38	37			1	2	27		7	1	38.	
Arenac	31	13	28	41			1	2	14		26	2	20.	
Baraga	17	9	29	38			6	1	17		20	5	34.5	
Barry	178	37	87	124		1	6	14	85		23	3	74.	
Bay	205	11	51	62		1	8	5	42		7		46.	
Benzie	58	10	55	65	1	1	7	3	35		22	5	55.	
Berrien	287	38	113	151		1	7	9	106		47	8	100.	
Branch	173	89	111	150	1		4	5	102	2	36	9	88.	
Calhoun	266	31	105	136	1	4	8	16	78		26	5	83.	
Case	144	22	59	81		4		4	58		15	18	51.	
Chippewa	48	7	25	32				8	27		7	1	26.1	
Clare	47	3	42	45			8		32		12	7	42.3	
Clinton	163	50	124	174			2	14	123		35	14	139.	
Crawford and Rose- common	40 21	5 4	38	43		1	2	4	28	1	7	3	88.	
Delta	58	4	38	42			1	2	38		6	2	22.5	
Eaton	201	54	162	216		4	8	8	152		45	8	155.	
Emmet	73													
Charlevoix	82	24	113	137			7	10	92		20	15	88.	
Cheboygan	66													
Genesee	229	51	131	181		2	7	25	112		28	11	117.4	
Gogebic	27	6	29	35			2	4	20		12	8	21.8	
Grand Traverse	87	8	52	60		2		2	47	2	7	3		
Gratiot	168	27	68	95	1		3	6	70		22	9	49.	
Hilledale	210	84	106	140			1	7	104		36	14	74.5	
Houghton	137					9	12	17	49	2	42	11	76.5	
Keweenaw	18	12	98	110										
Huron	128	43	120	163	2	4	8	17	81	3	47	10	154.8	
Ingham	213	26	111	136		1	2	11	89		38	8	54.4	
Ionia	203	21	146	167		1	1	5	121		50	4	124.4	
Iosco	53		28	28				2	24		4		19.8	
Isabella	115	42	81	123		8	4	4	78		39	15	66.8	
Jackson	250	131	408	539	3	28	11	41	237		189	113	857.	
"	250	34	86	120		2	4	8	79	1	39	15	65.	
Kalamazoo	226	42	163	200		2	2	11	129	3	68	25	163.6	
Kalkaska	58	19	37	56			2	2	37	1	23	3	47.	
Kent	494	20	136	156			3	10	115		36	1	122.	
Lenawee	287	34	129	163		1	7	18	110		40	14	77.	
Livingston	168	40	104	144	2	1	1	4	119		29	20	63.	
Luce	10	4	12	16				3	9		7	2	10.	
Macomb	152	20	36	56		2	9	8	36		12	6	38.7	
Manistee	111	18	60	73			1	2	38		32	2	57.9	
Marquette	121	11	58	69	4	1	5	5	41	16	4		53.8	
Mason	94	26	104	130		1	10	25	55		32	7	91.3	
Mecosta	130	20	107	127			2	13	65	5	42	5	88.3	
Menominee and Iron	105 20	37 4	4	45		2	8	4	29	1	10	9	40.1	

¹ Institutes continued two weeks.² Institutes continued three weeks.³ Institutes continued four weeks.⁴ Institutes continued eight days.

ENROLLMENT AT TEACHERS' INSTITUTES.

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TABLE XXVI.—Continued.

Counties.	Number of teachers required to supply the schools.	Number enrolled.			Kind and grades of certificates held by members.						No. without expe- rience in teaching.	No. having received Normal instruction.	Average attendance each half day.
		Men.	Women.	Total.	State.	Normal.	First.	Second.	Third.	Special.			
Midland.....	75	10	71	81	.....	.....	2	4	46	1	36	10	74.4
Missaukee.....	47	8	33	41	.....	.....	1	4	22	.....	6	.....	24.
Monroe.....	174	33	93	126	.....	2	5	9	85	8	26	103	81.5
Montcalm ¹	186	15	118	133	1	.....	1	7	85	.....	40	4	84.
Montmorency.....	22	7	24	31	.....	.....	3	1	14	.....	12	1	25.
Muskegon.....	204	12	51	63	.....	1	2	4	40	.....	21	5	49.
Newaygo.....	122	24	79	103	.....	.....	9	5	61	1	30	7	84.7
Oakland ¹	278	18	61	79	2	.....	3	6	49	1	19	7	47.
Oceana.....	98	31	75	106	.....	.....	2	9	78	1	6	8	92.9
Oscoda.....	112	17	60	77	.....	1	2	4	60	.....	10	9	60.
Oscoda.....	26	8	14	22	.....	.....	.....	1	15	2	3	1	18.
Otsego.....	45	16	44	60	.....	1	4	2	34	.....	19	2	54.
Ottawa.....	187	41	92	133	1	.....	13	25	71	.....	25	10	100.3
Saginaw.....	348	41	159	200	.....	.....	10	8	117	.....	65	6	143.
St. Clair ²	238	31	180	211	.....	1	1	8	141	.....	60	12	182.
St. Joseph ¹	179	33	72	105	3	4	1	7	64	.....	25	11	49.1
Sanilac.....	155	66	105	171	1	.....	3	23	79	.....	64	12	154.2
Shiawassee ¹	178	33	98	126	.....	.....	9	6	80	.....	31	4	72.
Tuscola ⁴	180	44	132	176	.....	2	5	14	118	.....	42	9	157.
Van Buren.....	199	31	98	129	2	1	4	7	90	.....	26	12	89.
Washtenaw.....	270	38	106	144	.....	.....	6	2	67	.....	.....	14	98.8
Wayne.....	693	48	458	506	3	7	38	14	.....	.....	.....	.....	.....
Wexford.....	97	17	51	68	.....	1	2	3	35	.....	26	1	54.

¹ Institutes continued two weeks.

² Institutes continued four weeks.

SUPERINTENDENT'S REPORT.

TABLE XXVII.

List of County Examiners for 1890-91.

Counties.	Names.	Postoffices.	Occupations.	Terms Expire.
Alcona.....	P. C. Goldie, Chairman.....	Harrisville.....	Clergyman.....	1891
	L. Frederick, Secretary.....	Harrisville.....	Teacher.....	1891
	J. W. Talmire.....	Harrisville.....	Teacher.....	1892
Alger.....	E. P. Hoffman, Chairman.....	Onota.....	Housekeeper.....	1891
	Fannie D. Johnston, Secretary.....	Rock River.....	Housekeeper.....	1891
	Edith O'Donnell.....	Munising.....	Teacher.....	1892
Allegan.....	J. F. Taylor, Chairman.....	Douglas.....	Clergyman.....	1891
	P. A. Latta, Secretary.....	Allegan.....	Attorney.....	1891
	Wm. McNamara.....	Wayland.....	Teacher.....	1892
Alpena.....	J. Cavanaugh, Chairman.....	Alpena.....	Justice of the Peace.....	1891
	F. S. Dewey, Secretary.....	Alpena.....	Merchant.....	1891
	James A. Case.....	Alpena.....	Farmer.....	1892
Antrim.....	F. E. Severance, Chairman.....	East Jordan.....	Farmer.....	1891
	W. M. Andrus, Secretary.....	Elk Rapids.....	Teacher.....	1891
	A. J. Chapel.....	Alba.....	Teacher.....	1892
Arenac.....	A. L. Wilkins, Chairman.....	Maple Ridge.....	Farmer.....	1891
	J. H. Belknap, Secretary.....	Omer.....	Teacher.....	1891
	Marion F. Parker.....	Standish.....	Merchant.....	1892
Baraga.....	* A. S. Hebard, Chairman.....	Pequaming.....	Lumberman.....	1891
	William L. Mason, Secretary.....	L'Anse.....	Attorney.....	1891
	C. E. Tuck.....	L'Anse.....	Teacher.....	1892
Barry.....	J. M. Smith, Chairman.....	Woodland.....	Teacher.....	1891
	Enoch Andrus, Secretary.....	Hastings.....	Teacher.....	1891
	Frank A. Bacon.....	Middleville.....	Teacher.....	1892
Bay.....	M. R. Hartwell, Chairman.....	West Bay City.....	Teacher.....	1891
	J. E. Kinnane, Secretary.....	Bay City.....	Lawyer.....	1891
	Jonathan Cook.....	Essexville.....	Teacher.....	1892
Benzie.....	Le Roy Morgan, Chairman.....	Empire.....	Farmer.....	1891
	E. A. Holden, Secretary.....	Oviatt.....	Surveyor.....	1891
	Mrs. Rose Woodward.....	Frankfort.....	Housekeeper.....	1892
Berrien.....	Henry Crosby, Chairman.....	New Buffalo.....	Teacher.....	1891
	Miss Rachel Tate, Secretary.....	Berrien Springs.....	Teacher.....	1891
	John C. Lawrence.....	Benton Harbor.....	Teacher.....	1892
Branch.....	C. C. Johnson, Chairman.....	Coldwater.....	Attorney.....	1891
	D. W. Herman, Secretary.....	Bronson.....	Teacher.....	1891
	H. W. McIntosh.....	Union City.....	Teacher.....	1892
Calhoun.....	S. T. Gorsline, Chairman.....	Battle Creek.....	Farmer.....	1891
	R. A. Culver, Secretary.....	Tekonsha.....	Teacher.....	1891
	Miss Lizzie M. Cook.....	Homer.....	Teacher.....	1892
Cass.....	Edmond Shoetzow, Chairman.....	Volinia.....	Teacher.....	1891
	Michael Pemberton, Secretary.....	Cassopolis.....	Teacher.....	1891
	Miss Harriet Graham.....	Union.....	Teacher.....	1892
Charlevoix.....	J. M. Harris, Chairman.....	Boyne City.....	Teacher.....	1891
	R. L. Corbett, Secretary.....	Boyne City.....	Attorney.....	1891
	J. E. Walrond.....	East Jordan.....	Teacher.....	1892
Cheboygan.....	W. C. Thompson, Chairman.....	Cheboygan.....	Teacher.....	1891
	G. S. Moore, Secretary.....	Cheboygan.....	Teacher.....	1891
	W. C. Thompson.....	Cheboygan.....	Teacher.....	1891
Chippewa.....	A. J. Murray, Chairman.....	Sault Ste. Marie.....	Teacher.....	1891
	S. P. Tracy, Secretary.....	Sault Ste. Marie.....	Physician.....	1891
	Peter Rowe.....	Sault Ste. Marie.....	Clergyman.....	1892

* Died 1891.

COUNTY SCHOOL EXAMINERS.

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TABLE XXVII.—Continued.

Counties.	Names.	Postoffices.	Occupations.	Terms Expire.
Clare	A. J. Doherty, Chairman	Clare	Merchant	1891
	W. W. Green, Secretary	Harrison	Judge of Probate	1891
	Louis L. Kelly	Farwell	Physician	1892
Clinton	E. M. Plunkett, Chairman	Ovid	Teacher	1891
	B. M. Winston, Secretary	St. Johns	Teacher	1891
	J. B. Stone	Waconsta	Farmer	1892
Crawford	Mrs. Isabella Cobb, Chairman	Frederic	Teacher	1891
	Joseph Patterson, Secretary	Grayling	Lawyer	1891
	William C. Johnson	Pere Cheney	Farmer	1892
Delta	Kirk Spoor, Chairman	Escanaba	Teacher	1891
	John Power, Secretary	Escanaba	Attorney	1891
	J. M. Satler	Fayette	Physician	1892
Eaton	Chas. McKinney, Chairman	Olivet	Teacher	1891
	Orr Schurtz, Secretary	Charlotte	Teacher	1891
	J. L. Wagner	Grand Ledge	Teacher	1892
Emmet	M. C. Crandall, Chairman	Levering	Merchant	1891
	A. L. Deuel, Secretary	Harbor Springs	Lawyer	1891
	Geo. Matthews	Cross Village	Farmer	1892
Genesee	William Wilson, Chairman	Flint	Teacher	1891
	E. D. Black, Secretary	Flint	Attorney	1891
	A. E. Ransom	Flint	Editor	1892
Gladwin	Miss Edith Johnson, Chairman	Gladwin	Teacher	1891
	E. M. Fisher, Secretary	Gladwin	Teacher	1891
	T. G. Campbell	Gladwin	Teacher	1892
Gogebic	Thos. Waters, Chairman	Bessemer	Miner	1891
	D. S. Monroe, Secretary	Ironwood	Attorney	1891
	J. W. Bedell	Wakefield		1892
Gd. Traverse	C. T. Grawn, Chairman	Traverse City	Teacher	1891
	Geo. McWethy Wethy, Secretary	Traverse City	Farmer	1891
	C. J. Kneeland	Traverse City	Physician	1892
Gratiot	Fred Fullerton, Chairman	Sumner	Teacher	1891
	O. G. Tuttle, Secretary	Elm Hall	Teacher	1891
	J. N. McCall	Ithaca	Teacher	1892
Hillsdale	J. E. Hammond, Chairman	Hillsdale	Teacher	1891
	W. A. Drake, Secretary	Hillsdale	Teacher	1891
	W. H. French	Leitchfield		1892
Houghton	Wm. Bath, Chairman	Houghton	Bookkeeper	1891
	James Dunstan, Secretary	Dollar Bay	Clerk	1891
	A. D. Edwards	Atlantic Mine	Clerk	1892
Huron	E. Baskins, Chairman	Ubyly	Teacher	1891
	James M. Bailey, Secretary	Bad Axe	Teacher	1891
	Jacob T. Borick	Bad Axe	Editor	1892
Ingham	J. B. Phillips, Chairman	Holt	Teacher	1891
	C. M. Youngs, Secretary	Dansville	Teacher	1891
	T. A. Stephens	Stockbridge	Teacher	1892
Ionia	Will Hutchison, Chairman	Lake Odessa	Teacher	1891
	C. L. Bemis, Secretary	Ionia	Teacher	1891
	E. A. Murphy	Muir	Teacher	1892
Iosco	D. E. Guiley, Chairman	East Tawas	Surveyor	1891
	C. S. Pierce, Secretary	Oscoda	Attorney	1891
	Jno. V. White	Oscoda	Physician	1892
Iron	W. T. Carpenter, Chairman	Stambaugh	Physician	1891
	G. L. Woodworth, Secretary	Stambaugh	Surveyor	1891
	E. P. Jennings	Crystal Falls	Mine supt.	1892
Isabella	James McIntee, Chairman	Mt. Pleasant	Physician	1891
	B. J. Jamison, Secretary	Mt. Pleasant	Teacher	1891
	Michael Devereaux	Mt. Pleasant		1892

SUPERINTENDENT'S REPORT.

TABLE XXVII.—Continued.

Counties.	Names.	Postoffices.	Occupations.	Terms Expire.
Jackson	E. N. Palmer, Chairman	Brooklyn	Physician	1891
	D. E. Haskins, Secretary	Concord	Teacher	1891
	Fred M. Harlow	Springport	Teacher	1892
Kalamazoo	Jesse Hazard, Chairman	Fulton	Teacher	1891
	Ashley Clapp, Secretary	Kalamazoo	Teacher	1891
	W. E. Conkling	Galesburg	Teacher	1892
Kalkaska	S. E. Neihardt, Chairman	Kalkaska	Physician	1891
	J. H. Andrews, Secretary	South Boardman	Teacher	1891
	J. D. Brown	South Boardman	Farmer	1892
Kent	C. R. Dockery, Chairman	Rockford	Teacher	1891
	A. H. Smith, Secretary	Grand Rapids	Teacher	1891
	E. A. Carpenter	Grand Rapids	Teacher	1892
Keweenaw	O. A. Farwell, Chairman	Phoenix	Teacher	1891
	Alfred Nichols, Secretary	Central Mine	Teacher	1891
	Lewis Terwilliger	Eagle Harbor	Teacher	1892
Lake	W. D. Ellis, Chairman	Chase	Teacher	1891
	Homer Cutler, Secretary	Luther	Farmer	1891
	Edwin G. Johnson	Baldwin	County Clerk	1892
Lapeer	G. H. Broesamle, Chairman	Imlay City	Teacher	1891
	C. A. Palmerlee, Secretary	Lapeer	Teacher	1891
	Byron Burnell	Columbiaville	Teacher	1892
Leelanau	W. H. Crowell, Chairman	Maple City	Farmer	1891
	A. E. Denmore, Secretary	Maple City	Teacher	1891
	E. J. Peck	Sutton's Bay	Teacher	1892
Lenawee	W. H. Mackey, Chairman	Hudson	Teacher	1891
	E. A. Wilson, Secretary	Tecumseh	Teacher	1891
	C. H. Bramble	Tecumseh	Farmer	1892
Livingston	Jas. B. Tozziman, Chairman	Oak Grove	Farmer	1891
	Louis E. Howlett, Secretary	Howell	Farmer	1891
	Frank Lamoreaux	Oak Grove	Farmer	1892
Luce	J. P. Mills, Chairman	McMillan	Clergyman	1891
	Chas. A. Dean, Secretary	Newberry	Teacher	1891
Mackinac	Louis Paley, Chairman	St. Ignace	Druggist	1891
	C. Y. Bennett, Secretary	St. Ignace	Attorney	1891
	Chas. Chambers	St. Ignace	Merchant	1892
Macomb	John A. Welts, Chairman	Utica	Teacher	1891
	S. B. Russell, Secretary	Mt. Clemens	Journalist	1891
	David Hammell	New Baltimore	Physician	1892
Manistee	Albert Walkley, Chairman	Manistee	Attorney	1891
	Mrs. Lois E. Hall, Secretary	Manistee	Teacher	1891
Manitou	W. J. Gallagher, Chairman	St. James	Fisherman	1891
	P. M. Maloney, Secretary	St. James	Teacher	1891
	Jno. Dunleavy	St. James	Teacher	1892
Marquette	Harlow Olcott, Chairman	Ishpeming	Teacher	1891
	J. B. Montgomery, Secretary	Champion	Teacher	1891
	F. D. Davis	Negaunee	Teacher	1892
Mason	H. D. Robinson, Chairman	Freeseil	Physician	1891
	B. S. Mills, Secretary	Fountain	Farmer	1891
	L. W. Roe	Ludington	Farmer	1892
Mecosta	J. T. Bard, Chairman	Sherman City	Teacher	1891
	P. M. Brown, Secretary	Big Rapids	Farmer	1891
	Mrs. Ellen P. Hansen	Morley	Teacher	1892
Menominee	S. B. Toby, Chairman	Norway	Teacher	1891
	J. W. Bird, Secretary	Menominee	Merchant	1891
	Jesse Hubbard	Menominee	Teacher	1892
Midland	J. W. Hill, Chairman	Midland	Teacher	1891
	C. L. Jenny, Secretary	Midland	Surveyor	1891
	Joseph M. Nelson	Coleman	Teacher	1892

TABLE XXVII.—Continued.

Counties.	Names.	Postoffices.	Occupation.	Terms Expire.
Missaukee.....	L. P. Lamb, Chairman.....	Lake City.....	Teacher.....	1891
	Roe P. Lamb, Secretary.....	Morey.....	.....	1891
	Wm. Bartholomew.....	Pioneer.....	.....	1892
Monroe.....	J. R. Rogers, Chairman.....	Temperance.....	Teacher.....	1891
	Levi A. Harshman, Secretary.....	Petersburg.....	Farmer.....	1891
	John Hayward.....	Morocco.....	Farmer.....	1892
Montcalm.....	F. C. Snyder, Chairman.....	Greenville.....	Farmer.....	1891
	J. E. McCloskey, Secretary.....	Sheridan.....	Teacher.....	1891
	A. W. Demory.....	Edmore.....	Teacher.....	.....
Montmorency.....	Wm. Breley, Chairman.....	Hetherton.....	Teacher.....	1891
	J. B. Beverly, Secretary.....	Hillman.....	Teacher.....	1891
	T. B. Johnston.....	Hillman.....	Teacher.....	1892
Muskegon.....	N. L. Downie, Chairman.....	North Muskegon.....	Teacher.....	1891
	H. A. Lewis, Secretary.....	Ravenna.....	Teacher.....	1891
	Chas. H. McLean.....	Whitehall.....	Teacher.....	1892
Newaygo.....	H. S. Garrison, Chairman.....	Fremont.....	Painter.....	1891
	Chas. W. Gardner, Secretary.....	Fremont.....	Clergyman.....	1891
	John Harwood.....	White Cloud.....	Attorney.....	1892
Oakland.....	Fred Wieland, Chairman.....	Pontiac.....	County Clerk.....	1891
	E. R. Webster, Secretary.....	Pontiac.....	Attorney.....	1891
	C. W. Soulbey.....	Milford.....	Teacher.....	1892
Oceana.....	G. C. Myers.....	Cranston.....	Farmer.....	1891
	D. E. McClure, Secretary.....	Shelby.....	Teacher.....	1891
	F. E. Young.....	Hart.....	Teacher.....	1892
Ogemaw.....	B. Bennett, Chairman.....	West Branch.....	Teacher.....	1891
	A. E. Sharpe, Secretary.....	West Branch.....	Journalist.....	1891
	H. S. Karcher.....	Churchill.....	Merchant.....	1892
Ontonagon.....	J. P. Jordan, Chairman.....	Ontonagon.....	Physician.....	1891
	Norman W. Hair, Secretary.....	Ontonagon.....	Attorney.....	1891
	A. C. Adair.....	Ontonagon.....	Teacher.....	1892
Oscoda.....	J. H. Thompson, Chairman.....	Evart.....	Teacher.....	1891
	E. H. Woode, Secretary.....	LeRoy.....	Teacher.....	1891
	A. B. Perrin.....	Reed City.....	Teacher.....	1892
Oscoda.....	J. J. McCarthy, Chairman.....	Mio.....	Attorney.....	1891
	Stuart Gorton, Secretary.....	Luzerne.....	Postmaster.....	1891
	Geo. W. Randall.....	Red Oak.....	Farmer.....	1892
Ottawa.....	Henry Whiteley, Chairman.....	Gaylord.....	County Clerk.....	1891
	Miss F. M. Towle, Secretary.....	Gaylord.....	Teacher.....	1891
	Elijah N. Warner.....	Gaylord.....	Teacher.....	1892
Ottawa.....	Alva Seiver, Chairman.....	Holland.....	Teacher.....	1891
	J. W. Humphrey, Secretary.....	Holland.....	Teacher.....	1891
	A. W. Taylor.....	Nunica.....	.....	1892
Presque Isle.....	Geo. T. Maloney, Chairman.....	Ocqueoc.....	Teacher.....	1891
	Griffin Covey, Jr., Secretary.....	Rogers City.....	Attorney.....	1891
	August Grossman.....	Rogers City.....	Farmer.....	1892
Roscommon.....	James Watson, Chairman.....	Roscommon.....	Farmer.....	1891
	Henry H. Woodruff, Secretary.....	Roscommon.....	Attorney.....	1891
	James Nolon.....	Roscommon.....	Farmer.....	1892
Saginaw.....	J. A. F. Strieter, Chairman.....	Frankenmuth.....	Teacher.....	1891
	Myron T. Dodge, Secretary.....	Saginaw.....	Teacher.....	1891
	Samuel Treby.....	Taymouth.....	Teacher.....	1892
St. Clair.....	D. R. Fairman, Chairman.....	St. Clair.....	Teacher.....	1891
	Engene F. Law, Secretary.....	Yale.....	Teacher.....	1891
	Miss Bina West.....	Capac.....	Teacher.....	1892
St. Joseph.....	J. G. Plowman, Chairman.....	White Pigeon.....	Teacher.....	1891
	Sheridan Osbon, Secretary.....	Sturgis.....	Teacher.....	1891
	John Evert.....	Mendon.....	Teacher.....	1892

SUPERINTENDENT'S REPORT.

TABLE XXVII.—Continued.

Counties.	Counties.	Postoffices.	Occupations.	Terms Expire.
Sanilac.....	{ C. L. Messer, Chairman..... Frank Battersbee, Secretary..... H. A. Macklem.....	Marlette..... Crowell..... Downington.....	Cashier..... Teacher..... Student.....	1891 1891 1892
Schoolcraft.....	{ I. H. Clark, Chairman..... W. F. Riggs, Secretary..... Mrs. J. D. Mersereau.....	Manistique..... Manistique..... Manistique.....	Attorney..... Attorney..... Housekeeper.....	1891 1891 1892
Shiawassee.....	{ Hudson Sheldon, Chairman..... H. B. Dewey, Secretary..... D. C. Cooper.....	Bancroft..... Owosso..... Corunna.....	Teacher..... Student..... Farmer.....	1891 1891 1892
Tuscola.....	{ E. D. Dimond, Chairman..... H. E. Gordon, Secretary..... Wm. N. Walton.....	May..... Unionville..... Watrousville.....	Teacher..... Teacher..... Teacher.....	1891 1891 1892
Van Buren.....	{ J. A. O'Leary, Chairman..... G. W. Cornish, Secretary..... William McMillan.....	Decatur..... Paw Paw..... Berlamont.....	Teacher..... Farmer..... Teacher.....	1891 1891 1892
Washtenaw.....	{ Arthur Brown, Chairman..... Martin J. Cavanaugh, Secretary..... M. J. Lehman.....	Ann Arbor..... Ann Arbor..... Chelsea.....	Deputy Co. Clerk..... Attorney..... Attorney.....	1891 1891 1892
Wayne.....	{ J. W. Gillespie, Chairman..... J. E. W. Lumley, Secretary..... L. Houghton.....	Dearborn..... Detroit..... Northville.....	Teacher..... Teacher..... Teacher.....	1891 1891 1892
Wexford.....	{ Miss Estelle Long, Chairman..... H. C. Foxworthy, Secretary..... L. A. Tibbitts.....	Cadillac..... Haire..... Cadillac.....	Teacher..... Teacher..... Farmer.....	1891 1891 1892

STATE AND INCORPORATED INSTITUTIONS

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TABLE XXVIII.
General Statistics of State and Incorporated Institutions, Compiled from Reports of Officers for the Academic Year 1889-90.

Name of Institution.	Location.	Date of organization.	Name of Principal, President, or Superintendent.	No. of instructors.	No. of students (or inmates) during year.	No. of graduates at last commencement.	Whole No. of graduates since founded.	No. of volumes in library.	No. of volumes added to library during year.
<i>State:</i> University of Michigan.....	Ann Arbor.....	1837	James B. Angell.....	95	2,157	548	10,100	74,599	4,082
Agricultural College.....	Lansing.....	1855	Oscar Clute.....	26	369	31	516	12,851	2,092
State Normal School.....	Ypsilanti.....	1850	J. M. E. Sill.....	29	811	114	1,774	10,000	2,000
Michigan Mining School.....	Houghton.....	1896	M. E. Wadsworth.....	8	35	7	20	6,470	1,904
Michigan School for the Deaf.....	Flint.....	1854	M. T. Gase.....	24	299	27	282	2,335	.....
Michigan School for the Blind.....	Lansing.....	1879	Robert Barker.....	9	95	8	.....	1,640	68
State Reform School.....	Lansing.....	1856	C. A. Gower.....	11	725	244	8,991	2,500	500
Industrial Home for Girls.....	Adrian.....	1879	Margaret Scott.....	6	315	.....	.....	903	180
Michigan State Public School.....	Coldwater.....	1874	C. T. Newkirk.....	6	203	.....	.....	1,849	28
<i>Incorporated:</i> Adrian College.....	Adrian.....	1859	G. B. McElroy.....	10	170	10	382	6,000	50
Albion College.....	Albion.....	1861	L. R. Fiske.....	25	496	41	480	7,400	510
Alma College.....	Alma.....	1887	Geo. F. Hunting.....	6	224	.....	.....	8,000	5,000
Battle Creek College.....	Battle Creek.....	1874	Wm. W. Prescott.....	23	563	30	.....	1,400	50
Detroit College.....	Detroit.....	1881	M. P. Dowling.....	16	279	9	58	4,000	.....
Detroit Home and Day School.....	Detroit.....	1882	Jas. D. Liggett.....	13	197	12	79	1,000	20
German American Seminary.....	Detroit.....	1861	S. Mart.....	4	148	.....	.....	800	25
Hilldale College.....	Hilldale.....	1855	Geo. F. Mosher.....	16	465	29	660	7,023	100
Hope College.....	Holland.....	1866	Chas. Scott.....	11	283	7	152	7,925	205
Kalamazoo College.....	Kalamazoo.....	1833	Monson A. Wilcox.....	10	168	.....	175	5,500	.....
Olivet College.....	Olivet.....	1859	H. Q. Butterfield.....	17	328	12	296	18,000	728
Michigan Female Seminary.....	Kalamazoo.....	1856	Isabella G. French.....	7	66	6	116	1,705	178
Michigan Military Academy.....	Orchard Lake.....	1877	J. Sumner Rogers.....	10	184	19	153	1,400	100
Raisin Valley Seminary.....	Adrian.....	1849	R. L. Kelley.....	3	85	6	100	225	.....
St. Mary's Academy.....	Monroe.....	1862	Mother M. Clotilda.....	24	161	5	44	2,300	300
Spring Arbor Seminary.....	Spring Arbor.....	1872	A. H. Stillwell.....	4	128	7	50	400	25

TABLE XXIX.

Financial Statistics of State and Incorporated Institutions, compiled from Reports of Officers for the Academic Year 1889-90.

Institutions.	Annual cost of tuition per student.	Average cost of board per week.	Total average cost per student (to the student).	Total average cost per student (to the State.)	Estimated value of grounds, buildings, apparatus, etc.	Amount of productive funds.	Income from productive funds.	Amount of legislative appropriation for the year 1890.	Receipts from tuition fees during the year.	Receipts from all other sources.	Current expenses for the year.	Expenses for permanent improvements.	Liabilities.
<i>State:</i>													
University of Michigan	\$35 00	a 84 00	\$190 00	\$47 68	\$1,100,000 00	\$45,946 47	\$88,618 54	\$90,700 00	\$95,882 79	\$118,116 25	\$235,990 99	\$42,108 38	-----
Agricultural College	b 15 00	2 85	110 00	85 00	450,000 00	474,864 86	32,228 79	23,967 00	195 00	10,863 53	46,222 97	10,000 00	-----
State Normal School	c 10 00	2 50	150 00	51 00	220,000 00	72,000 00	4,296 00	41,350 00	4,444 50	5,457 40	54,638 40	500 00	-----
Michigan Mining School	41 25	a 5 80	261 40	436 25	132,720 90	-----	-----	23,000 00	-----	15,389 09	15,389 09	49,182 85	-----
Michigan School for the Deaf	-----	1 00	-----	180 25	501,000 00	-----	-----	57,000 00	50 00	60,400 00	60,400 00	800 00	-----
Michigan School for the Blind	33 65	2 64	-----	273 30	175,076 75	-----	-----	24,412 50	-----	1,664 29	22,361 19	-----	-----
State Reform School	7 04	48	-----	73 00	257,000 00	-----	-----	53,000 00	-----	8,901 23	62,764 74	-----	-----
Industrial Home for Girls	-----	-----	-----	145 05	167,038 71	-----	-----	35,751 00	-----	889 62	35,786 58	763 58	-----
Michigan State Public School	-----	-----	-----	163 43	204,677 50	-----	-----	33,000 00	-----	190 86	33,277 99	200 00	-----
<i>Incorporated:</i>													
Adrian College	28 50	2 00	-----	-----	150,000 00	98,370 94	7,000 00	-----	2,999 48	5,913 40	1,161 26	-----	\$24,384 18
Albion College	-----	2 00	-----	-----	100,000 00	225,000 00	18,000 00	-----	1,550 00	20,600 00	35,500 00	-----	20,000 00
Alma College	18 00	2 25	-----	-----	70,000 00	80,000 00	5,000 00	-----	4,000 00	9,500 00	-----	-----	-----
Battle Creek College	35 00	a 2 75	-----	-----	110,485 64	-----	-----	-----	5,687 44	24,689 88	24,979 80	2,699 38	40,730 78
Detroit College	40 00	-----	-----	-----	160,000 00	-----	-----	-----	8,500 00	-----	-----	80,000 00	60,000 00
Detroit Home and Day School	100 00	10 00	-----	-----	25,000 00	-----	-----	-----	10,968 18	16,474 87	24,278 06	900 00	-----
German American Seminary	15 00	-----	-----	-----	110,000 00	180,000 00	11,000 00	-----	1,550 00	3,839 00	2,000 00	40 00	6,000 00
Hilldale College	1 50	2 25	-----	-----	45,000 00	127,498 00	7,888 02	-----	2,776 00	5,999 17	15,105 51	-----	-----
Hope College	15 00	2 50	-----	-----	60,000 00	110,000 00	6,708 53	-----	2,381 17	5,806 19	14,866 89	150 00	4,000 00
Kalamazoo College	25 50	2 50	-----	-----	144,818 82	848,916 15	15,000 00	-----	2,138 75	72,451 86	27,351 55	25,439 16	348,916 15
Olivet College	32 00	1 75	-----	-----	50,000 00	24,423 84	1,505 73	-----	610,721 78	-----	11,672 71	1,275 00	-----
Michigan Female Seminary	50 00	d 200 00	-----	-----	250,000 00	-----	-----	-----	-----	-----	-----	40,000 00	-----
Michigan Military Academy	e 450 00	-----	-----	-----	12,000 00	22,000 00	1,360 00	-----	2,050 00	1,415 50	3,408 00	-----	-----
Reisin Valley Seminary	22 00	2 00	-----	-----	81,773 00	-----	-----	-----	-----	-----	-----	1,060 00	-----
St. Mary's Academy	18 00	2 00	-----	-----	10,000 00	-----	-----	-----	1,200 00	-----	1,200 00	-----	250 00
Spring Arbor Seminary	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
a Including room. b To non-residents. c Admission fee. d Per year. e Including board. f Including room rent.													

REPORTS
OF
SECRETARIES
OF
COUNTY BOARDS OF SCHOOL EXAMINERS
FOR THE
SCHOOL YEAR.
1889-90.

SUPERINTENDENT'S REPORT.

TABLE XXIX.
Financial Statistics of State and Incorporated Institutions, compiled from Reports of Officers for the Academic Year 1889-90.

Institutions.	Annual cost of tuition per student.	Average cost of board per week.	Total average cost per student (to the student).	Total average cost per student (to the State).	Estimated value of grounds, buildings, apparatus, etc.	Amount of productive funds.	Income from productive funds.	Amount of legislative appropriation for the year 1890.	Receipts from tuition during the year.	Receipts from all other sources.	Current expenses for the year.	Expenses for permanent improvements.	Liabilities.
<i>State:</i>													
University of Michigan.....	\$35 00	a \$4 00	\$120 00	\$47 63	\$1,100,000 00	\$545,946 47	\$88,618 54	\$90,700 00	\$95,882 76	\$118,116 25	\$235,980 99	\$42,192 38	
Agricultural College.....	b 15 00	2 85	110 00	85 00	500,000 00	471,984 80	32,228 79	22,397 00	195 00	10,883 43	46,223 97	10,000 00	
Michigan Mining School.....	c 10 00	2 50	150 00	51 00	250,000 00	270,000 00	4,266 00	41,360 00	4,444 50	5,457 40	14,688 40	500 00	
Michigan School for the Deaf.....	41 26	1 00	261 40	138 26	133,730 90	72,000 00		22,000 00		15,389 09	31,389 09	49,182 85	
Michigan School for the Blind.....	33 68	2 64		273 30	173,076 75			37,000 00	50 00		60,400 00	500 00	
State Reformatory for Girls.....				73 00	227,000 00			24,412 50		1,664 29	23,861 19		
Industrial Home for Girls.....	7 04	48		145 06	167,038 71			33,000 00		8,901 23	42,764 71		
Michigan State Public School.....				163 43	234,677 50			35,751 00		689 62	36,768 56	763 18	
<i>Incorporated:</i>													
Adrian College.....	28 50	2 00			150,000 00	98,870 64	7,000 00		2,998 68	5,013 40	1,161 26		\$24,384 18
Albion College.....		2 00			100,000 00	225,000 00	18,000 00			20,460 00	38,500 00		20,000 00
Alton College.....	18 00	3 25			70,000 00	80,000 00	5,000 00		4,000 00	3,460 00			
Battle Creek College.....	28 00	a 2 75			110,488 64				5,837 44	24,686 88	24,979 80	2,668 35	40,730 78
Detroit College.....	40 00				160,000 00				8,500 00			80,000 00	60,000 00
Detroit Home and Day School.....	100 00	10 00			25,000 00				10,988 18	16,474 87	24,278 06	900 00	
German American Seminary.....	15 00					150,000 00	11,000 00		1,550 00	300 00	2,000 00	40 00	6,000 00
Hillsdale College.....	1 50	2 25			40,000 00	127,886 00	7,388 02		2,776 00	3,836 00	13,106 11		
Hope College.....	13 50	2 50			60,000 00	110,000 00	6,708 53		2,361 17	5,806 19	14,866 89	150 00	4,000 00
Kalamazoo College.....	22 50	2 50			144,818 82	848,916 15	15,000 00		2,128 75	72,451 86	27,351 55	25,439 16	348,916 15
Olivet College.....	32 00	1 75			250,000 00	24,423 84	1,505 73		6,172 75		11,672 71	1,275 00	
Michigan Female Seminary.....	50 00	a 2 00			250,000 00							40,000 00	
Michigan Military Academy.....	e 450 00												
Plain Valley Seminary.....	22 00	2 00			10,000 00	22,000 00	1,360 00			1,415 50	3,406 00		
St. Mary's Academy.....			156 00		81,713 00					880 98	14,068 88	1,060 00	
Spring Arbor Seminary.....	18 00	2 00			10,000 00						1,200 00		250 00
<i>a</i> Including room. <i>b</i> To non-residents. <i>c</i> Admission fee. <i>d</i> Per year. <i>e</i> Including board. <i>f</i> Including room rent.													

REPORTS
OF
SECRETARIES
OF
COUNTY BOARDS OF SCHOOL EXAMINERS
FOR THE
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1889-90.

REPORTS FROM SECRETARIES OF COUNTY BOARDS OF EXAMINERS.

ALLEGAN COUNTY.

The following statement is a brief outline of the work of the Board of School Examiners of Allegan County, Michigan, including also that of the Secretary, for the school year ending September 1, 1890.

In giving a resumé of the work accomplished by the Board, I will take it up in the order in which it has been performed. First in order, is the examination and certification of teachers.

This is the most difficult duty the Board has to perform. The Board fully recognizes the fact that unless a successful and efficient teacher is placed in the school room, all other efforts to establish and maintain a good school fall short of their object. Another fact is also to be kept in view, and that is that a person may acquire and possess a high order of literary attainments, and wholly fail in the necessary tact, enthusiasm, skill and art of successfully imparting it to children.

Whether an applicant that has never had any experience in this branch of the public service, possesses the art of teaching or can ever acquire it, is a problem that can only be solved by an actual test in the school room.

I believe that the present system of examination sufficiently tests the qualifications of applicants so far as academic acquirements go, for we have not had a single complaint from any source that those who have received certificates have not sufficient knowledge of the branches required to be taught in the public schools.

In some instances the schools have not been as efficient as they ought, and in all cases of this kind the trouble arises from a notion of false economy on the part of the district board in securing the services of a novice, because it is cheaper, when a dollar or two more a month would provide for the services of a skilled and experienced teacher. School officers should constantly keep in mind that it is good economy to provide the very best of teachers for the schools, and that to place a cheap, inefficient person in the school room is a wanton waste of the school funds, and a great injustice not only to the children of the district, but also to the taxpayers. In the business of educating children, it is not the quantity but the quality of the work performed that makes the return for the money expended.

Three hundred and sixty-eight persons applied to the board during the

year for certificates to teach in the public schools. Three hundred and twenty-five passed the examinations and received their papers. Nearly twelve per cent of those who applied failed to attain the required standard, and were rejected. The teaching force now holding valid certificates is as follows:

Holding Normal School Diplomas.....	8
State certificates.....	7
First grade certificates.....	17
Second " ".....	42
Third " ".....	250
Special " ".....	13
Total	337

The whole number of school districts in Allegan county, according to the last School Inspectors' reports is 184, including both rural and graded schools, and it requires 224 teachers to supply them in a single term.

The labor of visiting and inspecting the schools has been quite similar to that of previous years.

The Rev. J. F. Taylor made fifty-five visits last winter to the schools in the western part of the county. The Secretary of the Board has made 204 visits of inspection to the schools during the school year. During these visits to the schools, both Mr. Taylor and myself have collected and noted such items pertaining to the schools, in the appropriate blanks furnished by the department of education. We have also advised the teachers as to methods of school work as circumstances seemed to demand. In the performance of this duty, I am pleased to state that we have received the hearty coöperation of the teachers, and I trust the school work has been rendered more efficient.

The following educational meetings have been held during the year. A State Teachers' Institute was held in Allegan last fall, and one hundred and twenty-five teachers were enrolled during the session. It was ably conducted by Mr. H. R. Pattengill, and I am confident that all who attended received valuable aid and inspiration for better work. A State Teachers' Institute was also held at Martin this spring; eighty teachers were enrolled, and I am informed by those who were in attendance, that the instruction was very practical and beneficial to the members. I conducted a teachers' conference at Plainwell, and also one for two days at Douglas. Two teachers' meetings have also been held at Hamilton and three at Hopkins Station. The Allegan County Education Club has held two meetings—one at Wayland and one at Allegan. A society known as the Lake Shore Education Club has been organized for the western part of the county which has held two very successful meetings—one in school district No. 6, Ganges, and one at Saugatuck.

A State Teachers' Institute under the conduct of Prof. I. N. Demmon convened at Otsego, August twenty-fifth and is to continue two weeks. The prospect is that it will be very largely attended.

The State Institute work in this county has accomplished most excellent results for us during the year, and I am confident is growing in favor with the teachers and patrons of our schools.

In all of our county educational meetings, the exercises have been arranged according to a regular program, with topics assigned to experi-

enced teachers, who have treated them in the form of essays, followed by general discussions on the part of members.

I am confident that these meetings have resulted in great good in awakening new interest in educational questions, in giving teachers higher and broader views of their employment, and in awakening an interest among patrons, of the value of education, to their children.

I wish to call attention to the use of the course of study prescribed for the rural schools, by the State Department of Public Instruction. One hundred and twenty-two teachers of rural schools certify in their reports that they used the course of study during the winter term. I found the schools where this course was in use making very much better progress, and the work was much more systematically done than where it was not used. The use of this course of study is a very great step in advance for the rural schools, for it brings order out of chaos and prescribes limitations for the work, that are so essential in an educational system. A new manual of this course of study has been compiled, and I am confident that it will be used during the ensuing school year in every rural school in Allegan County.

The code of rules compiled for use in the rural schools has been adopted by one hundred districts, and has aided very much in securing order in the schools. It is very desirable that the remaining districts should adopt this code, and I expect to effect this adoption in the districts where the code is not now used.

There is a growing practice among school officers to contract with teachers for the school year. This is so important to the welfare of the schools, that the practice ought to be encouraged by all friends of the public school system. A change of teachers every term, means a waste of school funds, a hindrance to the progress of pupils, and a dissipation of the interest of the children in school work.

As previously observed, it takes two hundred and twenty-four teachers to supply the schools of Allegan County each term. As is well known, a large per cent of the more experienced teachers, from various reasons, leave the service every year. Their places must be filled with those who have crude ideas of teaching—novices without experience in the work, who must acquire their art at the expense of the opportunities of the school children, and the extravagant waste of the school funds. How best to meet this difficulty is a very serious question to the future welfare of our public schools.

I suggest that the time has arrived when a normal school is needed in our county for the proper training of those who propose to follow teaching as an employment. Such a school should have a prescribed course of study. Its curriculum should include the higher English branches, and the pupils should be trained in the latest and best methods employed in the art of teaching.

The teachers employed in the public schools of the county should be required to take a course of training in the county normal, and encouraged to complete its full course as soon as time and opportunity will allow. In this way a supply of trained teachers could be furnished to the rural schools, and they would not have to suffer as now from the blunders of the inexperienced. The limits of this report will not allow suggestions as to ways and means to provide such a school. I only seek to point out its necessity, and show the need of better means of training for those who are to engage in this branch of the public service.

I believe it would greatly improve the public school service, especially in the rural schools, if some limitation to the granting of third grade certificates could be provided.

If the law could be amended so as to bar out all third grade applicants who have received two full third grade certificates on former examinations, it would, in my judgment very materially improve the public schools, for it would require such applicants to advance to a second grade or quit the employment.

Such a course, I believe would deter many applicants who possess very meager acquirement, and who only expect to engage in the employment of teaching as a temporary make-shift, from offering their services as teachers in our public schools.

It would also tend to encourage those who mean to follow teaching as a permanent occupation, to advance to the higher grades, as soon as possible.

I herewith submit for your consideration tables compiled from the teachers' winter term reports of both graded and rural schools.

I have compiled the teachers' winter term reports as the schools are more fully attended during that season than at any other portion of the school year, and hence are the best evidence of the highest results attained during the school year.

Allegan County Graded Schools—Winter Term.

Graded Schools.	Boys enrolled.	Girls enrolled.	Total No. enrolled.	Belonging at close of term.	Withdrawn during term.	Average daily attendance.	No. non-resident pupils.	Salary of Superintendent.	Av. wages of department teachers.	No. weeks in term.	Cost of instruction per scholar per month.	Per cent of enrollment.
Allegan Village.....	327	388	665	587	128	516	50	\$1,100	\$28 42	12	\$1 26	78
Plainwell.....	158	180	338	320	18	296	28	900	34 00	12	1 14	72
Martin.....	70	88	158	147	11	141	53	630	33 50	10	97	88
Otsego.....	166	196	362	308	44	283	45	1,000	35 00	11	1 18	70
Douglas.....	86	74	160	147	13	126	23	800	30 00	12	1 18	71
Saugatuck.....	124	180	254	215	89	189	7	650	29 00	16	1 00	67
Wayland.....	66	75	141	141	3	118	16	600	21 66	12	1 16	83
Total.....	997	1,081	2,078	1,815	256	1,664	222					

Per cent of enrollment 71.

Allegheny County Rural Schools.

Townships.	Boys enrolled.	Girls enrolled.	Total No. enrolled.	Weeks of terms.	Belonging.	Withdrawn.	Average daily attendance.	Total wages per month.	Average wages.	Cost of instruction for each pupil per month.	Edue'l Journal.	Course of study.	Rules adopted.	Exercises.
Allegheny	80	75	155	84	123	27	106	\$147	\$24 50	\$1 40	4	8	8	3
Casco	239	195	434	131	362	69	284	292	32 44	1 03	6	3	4	5
Cheekshire	188	164	347	118	262	85	232	263	29 22	1 13	5	2	5	2
Clyde	70	79	149	68	143	6	111	140	28 00	1 26	3	4	1	1
Dorr	135	147	282	140	297	35	247	278	27 80	1 12	7	7	7	6
Fillmore	326	248	574	112	547	27	497	316	28 72	1 78	12	5	5	4
Ganges	186	157	343	150	285	58	239	321	32 10	1 34	12	7	7	8
Gun Plain	150	118	268	129	244	24	196	248	27 55	1 26	4	5	1	5
Heath	133	111	244	90	214	30	159	193	27 55	1 21	6	4	5	3
Hopkins	206	172	378	150	322	56	272	311	28 27	1 14	8	10	9	5
Laketown	97	96	192	82	164	28	126	125	25 00	1 99	0	3	1	2
Lee	105	97	202	72	202	20	134	166	27 66	1 24	3	3	2	3
Leighton	134	129	263	126	238	25	199	246	27 33	1 23	5	4	5	1
Manline	208	152	355	99	280	75	249	214	30 64	1 86	4	5	5	5
Martin	87	55	142	52	111	31	82	144	28 80	1 75	8	2	1	2
Monterey	152	156	308	180	308	54	209	256	32 00	1 22	7	6	7	4
Overisel	258	215	473	101	434	39	343	256	28 44	1 75	9	8	6	0
Otasego	87	65	152	87	133	19	111	176	22 00	1 58	5	7	4	5
Pine Plains	75	53	128	64	104	24	77	133	26 60	1 72	5	4	1	2
Salem	195	195	390	152	356	27	315	272	30 22	1 85	7	8	6	6
Sangateck	34	25	69	40	95	4	52	74	24 33	1 23	2	2	0	1
Trowbridge	168	128	291	123	260	31	216	220	27 77	1 01	7	4	1	4
Watson	143	139	287	161	255	32	201	319	29 00	1 59	6	8	5	6
Wayland	166	117	283	134	256	27	208	300	30 00	1 47	5	8	8	7
Total	3,662	3,097	6,759	2,625	5,972	858	4,802	5,410			185	123	99	81

Per cent of enrollment 67.

In closing I would remark that we should spare no effort to arouse an interest among the people in the welfare of our public schools. It is greatly to the advantage of every community to keep its schools on the highest plane of efficiency possible. Schools cost less than jails and criminal courts, and education and intelligence constitute the basis of good government and just laws.

I wish to acknowledge the services of my associates on the board who have so cheerfully advised with me in regard to the performance of my difficult duties. To them I owe a debt of gratitude, and I have tried to appreciate their counsels by a conscientious discharge of duty.

Very respectfully submitted,

P. A. LATTA, *Secretary.*

Allegheny, Aug. 25, 1890.

ANTRIM COUNTY.

Enclosed with this you will find the statistical report as called for in your circular of June 28th.

Soon after entering upon the work of Secretary one year ago, realizing the lack of uniformity in the amount taught to various grades I prepared the following brief outline of work for the country schools, and sent it to each teacher in the county.

Elk Rapids, November, 1889.

FELLOW TEACHERS—I enclose herewith an outline of work for your schools which I trust may be of some use in bringing about the state of things which it has in view.

Your coöperation is earnestly desired in this effort looking toward the improvement of the schools.

The classification of your pupils under the different divisions must of course rest with you.

This outline provides for four years' work only. An outline for four additional years will be prepared at once and mailed to those who wish it.

In order to secure the best results from this I suggest that you classify your pupils at once. This should be done without any serious derangement, causing change of books or classes.

Arouse an ambition in your classes to complete the work of the respective divisions. Give them examinations once a term or oftener and when a class is prepared to complete a division, examine them and I will furnish you with certificates of promotion for those who pass an average of 75 per cent.

Please fasten the outline to the inside of the cover of your register for preservation.

I shall be pleased to hear what progress you are making and will cheerfully answer questions pertaining to your work and assist you all that lies in my power.

Please write me if you wish the additional outline.

Sincerely,

W. M. ANDRUS, *Secretary.*

BRIEF OUTLINE OF WORK FOR ANTRIM CO., SCHOOLS.

With a view to securing greater uniformity of work in the schools of the county, the following outline of work is recommended, to be followed by each school in the county.

Each division before dropping the reader should complete the work given in connection with it.

FIRST READER DIVISION.

□ Write and read numbers to 100. Roman to L. Combinations to 10; 2's to 12x2; 3's to 12x3. Add columns of figures whose sum does not exceed 9. Simple subtraction. Write words from reader on slate or board.

SECOND READER DIVISION.

Write and read numbers to 10,000. Roman as far as used in reader. Combinations to 20. Tables through the 6's. Adding and carrying. Subtracting when figures in sub. are larger than the corresponding figures in the minuend. Multiplying—multiplier any number up to 200. Write portions of reading lesson daily. Spell all words in reader. Spell by sound occasionally.

THIRD READER DIVISION.

3d and 4th years.

Arabic to 100,000,000. Roman. Tables completed. Addition, subtraction, multiplication, division with definitions. One-half of small geography. Parts of speech, kinds of sentences, analysis of simple sentences, rules for capitals and period. Penmanship and spelling. Teach the diacritical marks. Use of dictionary.

FOURTH READER DIVISION.

5th and 6th years.

Arithmetic—Factoring, G. C. D., L. C. M., fractions, decimals, U. S. money and denominate numbers.

Grammar—Complete the elementary grammar or language lessons.

Geography—Complete the small book and first half of large book.

Spelling—Use a spelling book and lists of words selected from text-books. Have a few words written daily, using the diacritical marks to indicate the pronunciation.

Penmanship—One lesson daily for each pupil

FIFTH READER DIVISION.

7th and 8th years.

Arithmetic—Longitude and time, percentage and applications, mensuration, involution and evolution. Review the entire subject.

Grammar—Completed.

Geography—Completed in first half of the division.

U. S. History—Completed in last half of the division.

Pennmanship and Spelling—As in last division.

N. B. If pupils are reading in advance of other work, arrange your programme so that those subjects shall have a proportionately larger part of time until the work in the several branches corresponds with the outline.

This outline met with good success. Many of the schools were organized and were soon working smoothly by the outline. It proved especially helpful to young teachers.

The organization and classification of country schools was discussed at our county association meetings and much interest aroused.

The outline of work prepared the way somewhat, for the new course of study and the classification register, which were received early in June.

These registers were sent out to the schools in the county at once and up to the present time, reports have been received from forty-one districts.

These reports are called for at the opening and close of each term of school. Those already received evince a fair understanding of the plan and a willingness to carry it out in detail.

The teachers with one accord express themselves as highly pleased with the course of study and the register that accompanies it.

In visiting schools I have been able to reach sixty out of sixty-seven schools. Some closed unexpectedly, others in remote parts have not been in session when I have been in that part of the county, and in one instance the roads were in an impassable condition so that I was unable to reach the school before it closed.

The county association work has been placed under the supervision of the secretary. He is given power to call meetings at such times and places as will seem to accommodate teachers of the locality.

The above is respectfully submitted.

W. M. ANDRUS, *Secretary.*

BARAGA COUNTY.

I herewith submit my annual statistical report of the work of this board for the year ending September 30, 1890.

In addition I would say that the schools of Baraga county are in a prosperous and flourishing condition. The settlement of the country has been very rapid during the last year, and a corresponding improvement is noted in our school system.

We have adopted the new State manual and Welch's Register system, which promise to still better the opportunities afforded.

During the year we enjoyed a very pleasant and instructive institute, which was attended by every teacher in the county.

This was but the third institute we have had, and we sincerely wish that they could occur yearly.

Yours very resp'y

WM. L. MASON,
Secretary.

BAY COUNTY.

I herewith submit, in connection with the statistical report of Bay county, a brief statement of the work and plans of the county board, and myself as secretary for the past year. The board has been harmonious in its action, earnest in its work and zealously devoted to the advancement, classification and elevation of the schools of the county.

In Bay county, most of the schools hire teachers for the year, the terms averaging about eight months. Many of the schools commence on or about the first Monday of September, and often delayed the hire of a teacher till after the annual school meeting. Believing that it would be for the advantage of the schools to have the annual meetings held in July rather than September, the Board sent circulars to all the school boards of the county, requesting that the matter be brought up at the annual meeting and urging the date be changed as aforesaid, setting forth the reasons therefor as follows:

1st. It is proper that the board, which will have charge of the school and be responsible for its management during the year, should engage the teachers and make the necessary provisions for the year's work.

2d. It would give opportunity to make needed repairs to school houses and grounds during the summer vacation, to make all changes and improvements that might be voted at the annual meeting, and to have things in proper shape for the opening of school in September.

3d. It would enable school boards to make an earlier and better selection of teachers. Those districts that must wait till after their annual meeting in September, find that many of the better teachers are already engaged, and that they must choose from the remainder.

4th. It is required as a matter of justice to the teachers themselves. Under the present system, many teachers must wait until September before they are sure of their positions, and if, at the last moment, they should lose them, it is then too late to look elsewhere.

A large majority of the districts acted upon the recommendations of the Board, and made the proposed change in the date of their annual meeting.

During the past year, the Secretary, aided and supported by the members of the Board of Examiners, has steadily endeavoured to classify and systematize the work of the county schools, to secure uniformity of plans and efforts on the part of the teachers, and, as far as possible to grade the schools and to introduce a uniform course of study. As a means of reaching this end the Secretary prepared and had printed a preface to the course of study furnished by the Department of Public Instruction, setting forth our plans and purposes, explaining the courses of study, and the manner in which it should be used. This preface, attached to the course of study, has been placed in the hands of the teachers and made the basis for school organization and work throughout the county. We are gratified at the good results that have attended its use, and the success that has attended our efforts in this direction, and propose to put the new course of study into the schools at the opening of the year's work, and feel that our schools are prepared for it, and, that we have reached a point where it can be effectively used.

The frequent changes of teachers and the lack of any system of records showing the organization of the school and the work done by each class and each pupil, has presented a serious obstacle to this work. In order to remove this obstacle and to secure and make permanent what is gained in

school organization and classification from term to term and from year to year, and to enable each teacher to leave at the end of each term, a complete record of the work done by each class, we prepared and had printed blank records for that purpose, and furnished them to all the schools. In this record, one page was provided for each class, on which was to be recorded the name and age of each pupil, the time when each entered the class, the number of pages passed over, the standing, and the page from which the class was prepared to advance the next term. It also required a copy of the daily programme as actually used in the school, the number of classes and the time allotted to each, and the usual statistical report of attendance, and average from month to month. Two of these little books were furnished to each teacher at the opening of her term of school. Both were to be filled out alike, and at the close of her term, one sent to the Secretary to be filed in his office, and the other placed in the school register and turned over to the director for the use of the next term's teacher. The objects of these reports and records is to carry along without interruption the work of each school from term to term and from year to year, and to enable each new teacher to arrange her classes and organize her school to the best possible advantage. This she cannot do without a knowledge of what was done the previous term, and the records above mentioned furnish this knowledge to the teacher and Secretary as well.

Another feature of these reports is the system of credits for punctuality and regularity of attendance. The number of pupils neither absent nor tardy for each of the several months of the term is reported, and special roll of honor is provided in which the names of the pupils who were neither absent nor tardy for the term are recorded. With the pupils thus assured of full credit and recognition for their good work, both from the County Secretary and succeeding teachers, the punctuality of pupils and the regularity of their attendance has been much improved.

Very respectfully,

J. E. KINNANE,

Secretary.

BENZIE COUNTY.

I have visited every school in the county once during the year, and nearly all of them twice, suggesting, critising and advising.

It takes fifty-four teachers to supply our schools, and seventy-one teachers have been employed during the year, only twenty-four of whom remained in the same school through the whole year.

Of these three have held first grade certificates, six second grade, and sixty-two third grade.

The manual or course of study prepared by a committee of Secretaries and recommended by our State Superintendent, for use in district schools, has been placed in every school in the county, together with Welch's Classification Register. These with the system of reports from the teacher to the Secretary will give this officer a knowledge of the work being done in the schools, even before visiting them, and this plan will systematize the work to such a degree, that the Secretary's work will be much more efficient and satisfactory. If now with our new system of classification directors and school officers will only see the need of hiring teachers by the year instead of by the term and will do it, we may expect results far

beyond anything we can hope for under the present system of hiring one teacher for the winter term and another for the summer.

In many districts directors are awakening to the fact that teachers need more blackboards, dictionaries, maps, etc., and the result is that a number of our schools have been supplied with these very necessary articles the past year, more perhaps than in any one year before.

Our institute was never more of a success than the one held this month (August) in Frankfort. The attendance and interest has never been surpassed in the county. Over sixty actual teachers were enrolled. All of the instruction was practical and excellent, and especially helpful to the teachers, were Supt. J. R. Miller's talks on school discipline, and Sec'y Bemis' talks and explanations on the new course of study.

The county association of teachers has had four meetings, all quite well attended, and they have been very interesting.

Nearly all of our teachers have taken some educational journal during the year.

A reading circle of thirty-six members has been organized for the coming year, and altogether the outlook is hopeful and encouraging.

ROSE WOODWARD, *Secretary.*

BRANCH COUNTY.

The school year of 1889 and 1890 is of the past. In reviewing the work that has been accomplished we must consider the condition of the schools now as compared with their condition one year ago. At the annual joint meeting of the chairmen of the different townships with the board of examiners a great deal of interest was manifested by all that were in attendance in regard to the present condition of our schools, and also what was the best advice for their future prosperity. There seemed to be an unanimous opinion that the plan which was proposed by the secretary, of term reports by the teacher and a thorough classification of the pupils, was one of the things necessary to improve the condition and efficiency of the rural schools of the county. We have endeavored to carry the above plan into effect during the past year. The result on the whole has been very successful and satisfactory.

We are now satisfied by personal observation, that the above plan not only stimulates the pupil to do thorough work but also avoids to a great extent the very injurious and baleful system of repetition or going over the same part of a text book, term after term. Also by referring to this report the teacher is able to organize and classify his school on the first day of the term, thus saving much valuable time.

The question of uniformity of text books was mentioned in our report one year ago. As we still have some districts that are using anything and everything in the way of books, we wish to refer to the matter again. If the patrons of those schools could only be made to realize that by not having a uniformity of books no teacher can do as well by the pupils, for want of time, we think they would be willing to change. Also the pupils lose that stimulus or desire to be equal or superior to any of his mates which numbers always give to class exercises.

Again, those same districts, from a financial as well as an educational standpoint, are the losers.

The books that were recommended by the county board of school inspectors and the county examiners, are equal, if not superior to any

books that are in use, quite a good deal larger and cheaper. I will make but one comparison and that is on the geographies. Harpers' large book retails at \$1.08, Appletons' \$1.25, Barnes' \$1.25, Eclectic \$1.30 and Swinton's \$1.30. "In union there is strength." This saying is thoroughly applicable to all schools that are using a variety of text books on the same topic. We would say to those school officers, fall into line. We know you will be benefited by adopting the school books that were recommended. The list is as follows: Harper's New Readers, Harper's Geography, Reed and Kellogg's Grammar, Harper's Arithmetic, Harrington's Speller, Harper's Copy Book, Stoddard's Intellectual Arithmetic, Barnes' Brief History of the United States, Wright's Orthography, Smith's Physiology, Townsend's Civil Government and Cocker's Civil Government of Michigan.

The annual State Teachers' Institute of one week was held in July, with an enrollment of over one hundred and fifty teachers. We think those in attendance will concur with us when we say that the institute was a thorough success, and conducted in a manner that was both practical and profitable. The county and township Teacher's Meetings have been well attended, and we are certain that they have been the means of doing much good for the advancement of the teacher in methods and theory and practice of teaching. During the past year we have made between two and three hundred visits, to the schools of the county. We are glad to be able to report that we have not been obliged to close any school on account of incompetency of the teacher, although some schools have not been as satisfactory as we would wish.

Through many causes such as death, matrimony and supplying our graded schools we each year lose a large number of our best instructors from our corps of country school teachers. This deficit is largely supplied by those that are inexperienced in the work and have not received any Normal School training. Consequently we cannot, and ought not to expect that their first term will always be a thoroughly successful one. It takes one hundred and fifty-four teachers to supply the schools. (This does not include the Coldwater schools.) We think we can say of this small army, that on the whole it deserves the highest commendation from the public for the zeal with which it endeavors to do the very best work, with sometimes very limited means at hand to accomplish the desired end.

Several school houses that were hardly habitable have been thoroughly repaired and one new one has been built.

The sanitary condition of many of the out buildings is in a deplorable state. We wish to call the attention of school officers to the above and trust that during the ensuing year there will be a decided improvement. We wish to say a word in regard to the new State Manual for use in the district schools.

The aim of all educators is to attain the best results possible in a limited amount of time. A large per cent of the pupils are unable to attend any school, except the one in the district where they live. The course that is planned in the Manual is one that will give to such pupils a *thorough, practical* knowledge of all of the rudimentary branches and also aims to inculcate in them a desire for a higher education, a broader knowledge, not only of books but of everything pertaining to the positions in life which they will soon be called upon to fill. We would recommend that great care should be taken in the selection of a teacher, and that he be employed by the year. In a large measure the success of our graded schools is due

to that one fact. Theory and practice of teaching, ability to manage and instruct, is and will be a prominent factor considered in the granting of certificates. In conclusion would say, we trust that the result will be a thorough classification of the schools and that systematic, progressive work will be attained.

B. S. SPOFFORD, *Secretary.*

CHIPPEWA COUNTY.

There is a little to say relative to the condition of the schools differing from the last annual report.

We are steadily weeding out the poor teachers and raising our standard of qualification. The reports made by the secretary to the board of examiners are acted on as determining the efficiency of the teachers and we find that this method shuts out some who possess the scholastic qualification of teachers but cannot teach.

We have adopted the Welch classification register and a determined effort will be made to have it made a success.

Now I have one suggestion as to the character of the examination questions.

Let them be more on *principles* and less on *technicalities*.

The questions in geography at our last regular examination in August were a great improvement.

It matters but little so far as teaching ability whether one knows the location of some certain town, island, cape or river so that they understand the principles of the study.

A tangled question in arithmetic is of less value than a question which will show a teacher's understanding the "art of computation."

This obtains as well in physiology as anywhere else.

Let the teacher and scholar know and understand the principles of hygiene and leave the location of various organs obscure and unimportant to any but a physician to the medical fraternity. It is of vastly more importance that our youth be taught the proper care of their bodies than the location of the island of Reil, the convolution of Broca or any similar portion of our anatomy. Of what importance to the individual is the knowledge of the exact number of bones in the body compared with the care of his health?

I do not wish to criticise nor to dictate but express this opinion because it is my opinion, nothing more.

Yours truly

S. P. TRACY, *Secretary.*

CLINTON COUNTY.

To make our work more systematic and carry out the plan outlined last year, we required the teachers of our district schools to hold monthly written examinations and report the standings gained by the pupils on blanks provided for that purpose. Written work and the written test of the pupils' proficiency have been much neglected in our schools, not many of them ever having had anything of the kind, so we are much pleased with the results gained. Written examinations and tests have come to stay and the result is more work of the practical kind. We supplemented this work of our teachers by a township examination which was attended

by one hundred and thirty pupils of whom forty-nine received diplomas, which will admit them into any high school in the county without examination. The township examination is to bring about a closer relation between the country and high schools and cause an interest by both parents and pupils in the completion of the course of study.

Blanks were sent to the teachers asking them to make a report, giving various items of attendance, scholarship and punctuality. This report will give the succeeding teacher an idea of the scholastic advancement and character of the school.

We hail the State Manual and Course of Study as a great aid to assist in accomplishing better classification and systematic work. We shall use our influence to cause the adoption of Welch's Classification Register which we think must be used, or something of a like nature, to make our course of study effective.

Supervision is something more than merely visiting schools and a course of study and necessary blanks to report and preserve an account of the progress of schools must be had to make it the power it should be. The secretary needs a report of each school in the county at least once during the different terms of school. By means of which he can determine the progress and scholastic ability of the pupils. At his township examinations he can compare the *actual* standings of the pupils with the *reported* standings. This will have a tendency to advance the thoroughness of the teacher's work. This I have attempted.

During the year, visits have been made to schools in each school district in the county. A large number of schools have received more than one visit, according as their needs required and my time permitted. Over 200 official visits have been made and 156 different schools visited.

During the year we have held seven meetings of our teachers' associations and our August institute was attended by 174 teachers. It is due to my teachers to state that they as a class are warmly supporting all plans for the improvement of schools and are enthusiastically upholding our associations and institutes.

Our work for the ensuing year will be to carry out the work already begun.

R. M. WINSTON, *Secretary*.

EMMET COUNTY.

In compliance with instruction I transmit the following report for the school year ending Sept. 1, 1890.

Besides the regular examinations, we have held four specials; three in the fall and one in the spring.

There have been ninety-five applicants for certificates at public examination. Of these four have obtained second grade certificates, and sixty-two third grade. It was decided to grant no special certificate to any applicant for such, who had not previously taught with success, except upon unanimous request of the district board and then only in case of urgent necessity, fourteen specials have been issued. The holders of most of these afterward obtained regular certificates.

Our county has sixty-one county districts, one graded village school, and one school under special charter. Of the county districts, fifty-eight have had school this year.

In visiting our schools I have found the teachers upon the whole inter-

ested and alive to their work trying to improve, and glad to receive and act upon any suggestion leading to the advancement of their schools in any way. Many winter schools were seriously interrupted by the prevalent epidemic, "La Grippe."

For all in all our schools have been quite successful, but there will be much improvement before they become all that could be desired. Our county is new and the people not as well off financially as are those of the older counties, and although commendably inclined to curtail expenses in other directions, and are comparatively liberal in the interests of schools, they are not able to do all they would like to do. Several districts are in need of better houses. More need school apparatus; dictionary reading chart, maps, etc., and more months of school during the year. School officers are beginning to realize the advantage of retaining a good teacher term after term, even at an advance in salary and are engaging teachers for the year in several districts. Books are now nearly uniform throughout the county; a supply of Welch's Classification Registers has been secured and placed in the schools. Teachers are familiarizing themselves with the work, and we expect to see, another year, better classification, better attendance, and more systematic work.

I wish to express my appreciation of the cordial assistance and many indulgences extended to me by Messrs. Botsford and Metz, members of the board.

Very respectfully,
N. H. CRANDALL, *Secretary.*

GENESEE COUNTY.

Inclosed find annual report.

The question relative to proper classification, prior to January 1890, was taken largely from the statement of the teachers. Since that time we have used our judgment as to said classification and had the same been used previous to 1890 the number would have been less.

The grading question has been quite generally discussed in this county, at conventions at the court house and in the school houses of the county. The opposition with which we have met, has been from the Patrons of Industry.

If the Legislators at the next session will not interfere with the present law (which I fear they will) in two years all will be satisfied that the grading of the district schools has been a step in the right direction.

Should we attempt to push the township unit plan, I doubt not that we will meet with such an opposition as to place us back to the township plan of a few years ago, and do away with a county board.

The intelligent people are on our side now, but they do not represent the masses. We are daily winning men who see by their school, the benefits to be derived from grading. If we can have a year or two without change of law all will see the benefits to be derived and will not wish for a change.

Respectfully,
E. D. BLACK, *Secretary.*

10. That we deprecate the holding of summer normals and institutes by members of the county board that can in any way conflict with the interests and success of the institutes in their several counties.

Adopted unanimously.

Committee on county supervision reported as follows:

Your committee appointed to consider the present method of county school management begs leave to present the following expression of opinion:

The progress of educational reform has often been slow and halting, made so largely by its frequent retreats and redoubling upon its course.

The present system of county board of examiners and enlarged powers of the county secretary have been secured by much patient thought and earnest struggle of the friends of education.

Now, to abandon this system and to return to the loose, irresponsible methods that preceded the advent of the present system, we believe would be to yield an important vantage ground, and to settle back into conditions that have never given us good schools or efficient teachers.

We believe the only wise and safe thing to do is to push forward and give the present system a full, fair trial.

W. S. PERRY,
L. R. FISKE,
H. N. FRENCH,
A. B. PERBIN,
Committee.

Adopted unanimously.

Committee on resolutions reported as follows:

The committee on resolutions would respectfully report the following:

Resolved, That the State Teachers' Association of Michigan, assembled in their fortieth annual meeting does hereby tender its sincere thanks:

1. To the honorable mayor and council and to the citizens of Grand Rapids, who by their cordial welcome and by their presence and enthusiastic interest in our sessions, have so greatly contributed to the pleasure and success of our meeting.

2. To Prof. Shephard and his associates, for the delightful music afforded us; by no means forgetting the chorus exercise by the six hundred public school children. Also to Sup't. W. W. Chalmers and his associate teachers on whom so many burdens in connection with our meeting have fallen.

3. To the First Baptist church for the use of its beautiful and commodious edifice.

4. To the hotels of Grand Rapids for reduced rates and excellent entertainment, and to the railroads in Michigan for reduced fares.

5. To the officers of the Association and to the participants in the exercises of the program.

Resolved, That we show our hearty appreciation of the courtesies extended to us by requesting our executive committee to arrange for our next meeting in the city of Grand Rapids.

W. B. OLIZBE,
E. M. RUSSELL,
EMMA RICE,
Committee.

Adopted unanimously.

Committee on nominations reported as follows:

For executive committee 1890-93—Prof. F. A. Barbour, Ypsilanti; Miss Georgia Bacon, Grand Rapids; Supt. W. H. Cheever, Lansing.

For first vice president—Supt. J. W. Simmons, Owosso.

For second vice president—Supt. C. T. Grawn, Traverse City.

For secretary—Supt. E. M. Russell, Battle Creek.

For treasurer—Secy. C. L. Bemis, Ionia.

C. B. HALL,
AUSTIN GEORGE,
CORA CUMMINS,
MRS. FERGUSON,
I. N. DEMMON,
Committee.

Adopted unanimously.

The association next proceeded to ballot for president, and elected Orr Schurtz of Charlotte on the first ballot.

Committee on Miss Amanda Stout's method of reading reported the following:

The committee appointed to confer with Miss Amanda Stout in relation to her method of teaching reading report that they have performed the duty assigned them as thoroughly as the very limited time at their command would allow. Time does not permit us to give any extended account of the method. We can only say that we were interested in Miss Stout's explanations, and we would suggest that the superintendent of schools in Grand Rapids, if circumstances will allow, give opportunity for fully testing the method, and that at some time in the future, he give to the association the results of such tests.

CHARLES SCOTT,
W. H. CHEEVER,
D. PUTNAM,
Committee.

Paper—"Physical Culture"—Mary A. Blood, Principal Columbia School of Oratory, Chicago.

PRIMARY SESSION.

Paper—"Science Teaching in Primary Grades"—Miss Nina C. Vanderwalker, Ypsilanti.

Discussion opened by Supt. W. H. Honey, Monroe.

General discussion participated in by Supts. McCall, Ithaca; Albert Jennings, Manistee; J. C. Bryant, Montague.

Paper—"First Steps in Number Work,"—Mrs. Mary C. Stanton, Bay City.

When the paper was called the Secretary read a telegram from her saying that she was detained at home on account of illness. A letter was also read from Supt. Kendall saying that he had been called to New England by the serious illness of a friend, and could not be present.

This part of the program was then omitted.

The discussion of the paper upon the "Grading of the Country Schools" was here resumed. The discussion was participated in by Principal C. B. Hall, Detroit; Principal C. F. Wade, Elm Hall; Supt. F. E. Stroup, Midland; and Secretary E. A. Wilson, Tecumseh.

Music: Song—Miss C. Goodman.

The treasurer's report was read as follows:

TREASURER'S REPORT—MICHIGAN STATE TEACHERS' ASSOCIATION.

RECEIPTS.

Received from former treasurer.....	\$224 91
Additional dues.....	2 00

Interest	\$3 00
Membership fees	334 50
Will Carleton's lecture	135 00
Total	<u>\$699 41</u>

EXPENDITURES.

Miss Ford, stenographer	\$15 00
Expenses, executive committee	32 46
Express	75
D. D. Thorp, membership tickets	2 25
D. D. Thorp, printing proceedings, 1889	70 00
Will Carleton's lecture	100 00
West Mich. Printing Co.	1 25
J. G. Plowman, itemized bill	30 00
D. A. Hammond, itemized bill	4 74
D. A. Hammond, itemized bill to Ainger and Baxter	24 25
D. A. Hammond, itemized bill	22 18
Total	<u>\$303 48</u>
Amount on hand	<u>\$395 93</u>

W. H. CHEEVER,
Treasurer.

Report accepted and adopted.

The association directed that the next meeting be held in Grand Rapids.

On motion of Supt. McCall the executive committee was directed to procure a popular lecturer for next year's association.

Miss Blood here gave a five minute talk on calisthenics.

Miss Field gave an explanation of the instruction frame on exhibition by Houghton, Mifflin & Co.

President Plowman thanked the association for the hearty support they had given him in the discharge of his duties, and introduced the new president, Orr Schurtz of Charlotte.

Mr. Schurtz made a short speech of acceptance and adjourned the association.

D. A. HAMMOND,
Secretary.

J. G. PLOWMAN,
President.

LIST OF MEMBERS
OF THE
MICHIGAN STATE TEACHERS' ASSOCIATION, 1891.

Andrus, Mrs. Enoch, Hastings.	Blodgett, Chas. L., Ann Arbor.
Andrus, W. M., Elk Rapids.	Brewer, Jessie, Dundee.
Ames, Florence, Grand Rapids.	Blakley, Miss A., Grand Rapids.
Aldrich, Grace, Bowne.	Burdon, Lillian, Grand Rapids.
Aldrich, May, Bowne.	Barr, S. D., Albion.
Andrus, Harry, Hastings.	Beman, W. W., Ann Arbor.
Andrews, J. W., South Boardman.	Brown, J. F., Centreville.
Andrus, Enoch, Hastings.	Brown, P. M., Big Rapids.
Arnold, Libbie, Big Rapids.	Boer, Addie M., Grand Haven.
Andrews, Ella, Frankfort.	Braley, Frank W., Palo.
Allen, Cora, Coldwater.	Bacon, Georgia, Grand Rapids.
Allen, Jennie, Vermontville.	Bodwell, M. Lizzie, Bear Lake.
Albert, Julia, Ravenna.	Bishop, Lana, Grand Rapids.
Allen, Ida, Canada Corners.	Bailey, Susie, Grand Rapids.
Barbour, F. A., Ypsilanti.	Bowen, W. P., Ypsilanti.
Boynton, Miss E., Grand Rapids.	Ball, Julia, Benton Harbor.
Boynton, Gertrude, Grand Rapids.	Bennett, Jennie E., Grand Rapids.
Brooks, E. L., Mancelona.	Barnard, Jennie M., Grand Rapids.
Boyer, Ella, Westville.	Brown, Flora, Berlin.
Bronson, J. J., St. Joseph.	Boyce, Mary, Sparta.
Bemis, C. L., Ionia.	Bailey, Bert H., Palo.
Bryant, James C., Montague.	Bailey, Ella, Grand Rapids.
Bradley, E. P., Coldwater.	Buchanan, Alice, Plainwell.
Bradley, L. May, Coldwater.	Bailey, Hattie M., Grand Rapids.
Broesamle, Geo. H., Imlay City.	Briggs, E. L., Grand Haven.
Blodd, Miss F. M., Grand Rapids.	Barbour, Mrs. Frank, Caledonia.
Boies, Mrs. W. E., Grand Rapids.	Bicknell, Louetta, Cedar Springs.
Brown, Alice, Grand Rapids.	Butler, Hattie, Morley.
Briggs, Mrs. E. L., Grand Haven.	Barker, Nellie, Fennville.
Brown, E. N., Allegan.	Barton, H. H., Muskegon.
Brothers, Mrs. Florence, Grand Rapids.	Barton, Ella M., Muskegon.
Brown, Florence, Reed City.	Bowmaster, Myra J., Hudsonville.
Burch, Carrie, Grand Rapids.	Bailey, Lotta, Grand Rapids.
Bettes, Lucy, Grand Rapids.	Barr, Chas. E., Albion.
Brown, Viola, Coldwater.	Corbin, Julia, Hesperia.
Bacon, F. A., Middleville.	Clarke, J. R., Woodland.
Bissell, W. C., Richland.	Cook, Daniel G., Vriesland.
Bates, Geo. E., Orion.	Cilley, Earl, Lamont.
Bates, Mrs. Ella, Orion.	Converse, Frank, Pontiac.
Baker, Jessie, Springport.	Chapman, W. E., Sparta.
Bishop, Bertha, Leroy.	Coburn, Seth, Zeeland.
Benjamin, Anna, Zeeland.	Clark, Helen, Grand Rapids.
Brown, Hugh, Pontiac.	Cobb, F. I., Martin.
Biscomb, J., Newaygo.	Cupples, J. W., Corunna.
Biscomb, Mrs. J., Newaygo.	Cook, Webster, Detroit.
Brown, Lizzie A., Charlotte.	Clute, O., Agricultural College.

- Chatfield, L. O., Benton Harbor.
 Clark, Carrie A., Belmont.
 Cook, W. G., Birmingham.
 Cook, Hattie, Detroit.
 Cadwell, Mary, Ionia.
 Cornell, Aggie, Grand Rapids.
 Cooney, Ella, Dennison.
 Cheever, W. H., Lansing.
 Conklin, Flora B., Springport.
 Cogshall, Chas. H., Labarge.
 Creager, Minnie, Gooding.
 Carson, O. H., Lansing.
 Church, E. P., Cadillac.
 Cronwell, Florence, Grand Rapids.
 Cuddeback, Elnora, Alma.
 Chalmers, W. W., Grand Rapids.
 Catton, Geo. R., Kalkaska.
 Cole, Ida, Grand Rapids.
 Chappell, Cassa, Berlin.
 Clapp, Ashley, Kalamazoo.
 Conklin, W. E., Galesburg.
 Cornell, Miss F. C., Coldwater.
 Cargill, Miss C. M., Grand Rapids.
 Cummings, Miss E. E., White Pigeon.
 Chase, Nelly, Grand Rapids.
 Chick, Nettie, Manton.
 Chandler, Georgia, Cadillac.
 Daef, J. W., Pierson.
 Demoray, A. N., Edmore.
 Daggett, Mary, Whitehall.
 Daniels, Sadie, Grand Rapids.
 Daniels, Fannie, Grand Rapids.
 Davenport, Miss L. A., Grand Rapids.
 Dimmock, Mae, Grand Rapids.
 Dockery, Ella, Rockford.
 Dickey, Miss J. C., Grand Rapids.
 Durkey, Emma A., Greenville.
 Dillenback, Dora, Grand Rapids.
 Denmore, A. E., Maple City.
 Doxie, Georgia, Grand Ledge.
 Davis, W. W., Ludington.
 Demmon, I. N., Ann Arbor.
 Doctor, Anna, Holland.
 Donovan, Kate, Decatur.
 Dennison, Eva, Grand Rapids.
 Davis, W. H., Lake View.
 Dalley, Mrs. N. M., Dowagiac.
 Drew, Earl, Sunfield.
 Deffendorf, Lura, Dowagiac.
 Easton, Lillian, Grand Rapids.
 Elderkin, Tessie, Altona.
 Evans, T. L., Eaton Rapids.
 Engall, Allie, Portland.
 Ence, H. M., Charlevoix.
 Essery, Evan, Luther.
 Everhart, Eloise, Grand Rapids.
 Everest, Miss Louie, Lyons.
 Everest, Wilma, Saranac.
 Fanson, Mary, Eaton Rapids.
 Fay, Emma, Grand Rapids.
 Ferguson, Hattie, Grand Rapids.
 Ferguson, Mrs. S. C., Howard City.
 Field, Bertha, Ballards.
 Field, Edith, Ballards.
 Field, Emma, Grand Rapids.
 Fiske, L. R., Albion.
 Fisher, G. C., Muskegon.
 Forbes, Ira L., Vassar.
 Fortney, Frank, Charlotte.
 Fox, Florence C., Lansing.
 Foxworthy, H. C., Haire.
 French, H. N., Kalamazoo.
 Finn, Alice, Grand Rapids.
 Finn, Nellie, Grand Rapids.
 Fisk, G. M., Cassopolis.
 Flanagan, May, Orleans.
 Flanagan, Aurea, Saranac.
 Fox, Chas., Brown City.
 French, W. H., Litchfield.
 Fuller, S. Alice, Greenville.
 Garman, Lillian, Centreville.
 Gafney, Mary, Auburn.
 George, Austin, Ypsilanti.
 Gilpin, Lucinda, Sunfield.
 Golds, Mate, Ada.
 Gotts, Edith G., Muskegon.
 Grawn, C. T., Traverse City.
 Greene, Elcina, Hartford.
 Gulley, R. H., Mason.
 Goodenow, Cora, Berlin.
 Graves, M. O., Petoakey.
 Gregor, B., Thornville.
 Gregg, U. C., Standish.
 Gregg, Mrs. Myrtie, Standish.
 Halsey, Leroy, Chicago.
 Harris, Ella, Hartford.
 Harlow, Fred M., Springport.
 Hartwell, S. O., Kalamazoo.
 Hall, C. B., Detroit.
 Hall, Mrs. L. E., Manistee.
 Hallock, Ella, Hastings.
 Hamilton, Cora, Coopersville.
 Hammond, D. A., Charlotte.
 Hanchett, Lizzie, Grand Rapids.
 Harvey, Will, Bangor.
 Haskins, D. E., Concord.
 Hasting, Ella, Big Spring.
 Hasting, Winnie, Coopersville.
 Hawley, Hattie, Rockford.
 Hawley, Hattie R., Grand Rapids.
 Healy, Lizzie, Gobles.
 Hinsdale, B. A., Ann Arbor.
 Hill, Nellie F., Kalamazoo.
 Hill, Mrs. Jennie K., Grand Rapids.
 Holton, Mrs. Carrie A.
 Houston, J. D., Marshall.
 Howard, E. D., Three Rivers.
 Humphrey, J. W., Holland.
 Humphrey, Clare, Holland.
 Hayes, Emma B., Springport.
 Hetley, J. H., Shelby.
 Herrod, Ada, Kent City.
 Higgins, S. E., Holland.
 Hill, W. D., Lawton.
 Hinkley, Cora, Paw Paw.
 Hogmire, Anna, Hartford.
 Holzenger, Marie, Eaton Rapids.
 Honey, W. H., Monroe.
 Hoppin, Ruth, Ann Arbor.
 Hope, Cora, Big Rapids.
 Hooper, Lizzie, N., Dalton.
 Houghtaling, Jennie, Howell.

Houghton, S. L., Detroit.
 Howland, Jennie, Grand Rapids.
 Hoyle, Nellie, Cedar Springs.
 Hoyt, Chas. O., Jackson.
 Hudson, Richard, Ann Arbor.
 Hunter, May, Lowell.
 Hyde, Clara, Grand Rapids.
 Hyde, Myrtie, Rockford.
 Irving, Anna, Bangor.
 Jamison, S. J., Mount Pleasant.
 Jennings, A. F., Manistee.
 Jennison, Kittie, Manton.
 Jeffers, Fred A., Ypsilanti.
 Jennings, Albert, Manistee.
 Jennings, A. T., Manistee.
 Johnson, Bertha, Ballards.
 Johnson, Edwin, Olivet.
 Johnson, Lelie, N. Muskegon.
 Jones, Mina, Lowell.
 Jordan, Lou, Grand Rapids.
 Key, George, Ypsilanti.
 Keeler, E. Morenci.
 Kimes, Emma, Ypsilanti.
 Kingston, Angie, South Haven.
 Kittell, W. E., White Pigeon.
 Krubner, Katie, Maple City.
 Krell, Carrie, Grand Rapids.
 Kleinheksel, John H., Holland.
 Kerr, Mary E., Grand Rapids.
 King, Florence E., Grand Rapids.
 Knettle, Ida M., Grand Rapids.
 Laird, S. B., Dowagiac.
 Laraway, Frank O., Shelbyville.
 Laraway, Stella, Grand Rapids.
 Larzelere, C. S., Lowell.
 Lawrence, G. C., Williamston.
 Leisenring, L. W., Bellevue.
 Lee, Fannie, AuSable.
 Lewis, Mabel, Allegan.
 Lewis, Nellie, Martin.
 Lillie, Lou, Coopersville.
 Linderman, Olive, Grand Rapids.
 Lowes, Winnie, Grand Rapids.
 Lumley, J. E. W., Detroit.
 Lunakee, John J., Corinth.
 Luten, Jennie, Grand Rapids.
 McAllister, Lida, Kalamazoo.
 McCall, J. N., Ithaca.
 Macomber, Jennie E., Kalamazoo.
 McDonald, J. E., Tawas City.
 McCloskey, J. E., Sheridan.
 McNamara, Wm., Wayland.
 McKone, W. J., Almont.
 Mayhew, Emma, Detroit.
 Mickens, C. W., Utica.
 Miller, J. R., Ludington.
 Mills, Carrie, Bailey.
 Mayhew, Ira, Detroit.
 Mosher, Mrs. Nellie, Traverse City.
 Macomber, Hattie, Greenville.
 Manley, Jennella, Grand Rapids.
 Manley, Luella R., Grand Rapids.
 Mulder, Ella, Spring Lake.
 Merrill, Della N., Kalamazoo.
 Moss, W. R., Ypsilanti.
 Martin, Mrs. Minnie, Lowell.

Munson, Nellie, Grand Rapids.
 McLaughlin, O. M., Nashville.
 Mansfield, Mrs. J. R., Hesperion.
 Myers, Mrs. C. D., Gobles.
 McWethy, George W., Traverse City.
 McClure, Maggie, Owosso.
 McDiarmid, Warren, Bowne.
 McDonald, Marion, Shelbyville.
 McGee, G. A., Reading.
 McLaughlin, Jennie, Sturgis.
 McVean, Maggie, Alto.
 Matthews, J. W., Grand Rapids.
 Merrill, G. A., Portage.
 Mekiel, Phenie, Sparta.
 Merriman, Ida, Grandville.
 Merriman, L. H., Rockford.
 Mills, Wiley W., Holland.
 Millsbaugh, Helen, Hastings.
 Moore, Marguerite, Grand Rapids.
 Moss, Carrie, Grand Rapids.
 Moss, M. S., Maple Rapids.
 Nicholson, Alice, Cedar Springs.
 Noyes, Jessie, Grand Rapids.
 Noel, Agnes, Grandville.
 Orr, Clara B., Grand Rapids.
 Orcutt, Georgia, Grand Rapids.
 O'Keefe, Maggie, Dowagiac.
 O'Keefe, J. F., Saginaw.
 O'Leary, J. A., Bangor.
 Orr, Nellie F., Coldwater.
 Owen, Nellie N., Grand Rapids.
 Pinvey, Kate M., Grand Rapids.
 Palmerlee, C. E., Lapeer.
 Perry, Jessie, Orion.
 Perry, Mrs. A. B., Reed City.
 Papeon, George D., Howard City.
 Pebody, Laura J., Whitehall.
 Plowman, J. G., White Pigeon.
 Parkhurst, Lena, Kalamazoo.
 Parkhurst, Nellie, Ovid.
 Perry, Kate, Lowell.
 Poppen, Klass, Zeeland.
 Powell, K. L., Lawton.
 Palmer, Emma, Grand Rapids.
 Parr, W. H., Crystal.
 Patten, Bertha, Grand Rapids.
 Pattengill, H. R., Lansing.
 Perrin, A. B., Reed City.
 Perry, W. S., Ann Arbor.
 Petrie, Jennie, Grand Rapids.
 Petrie, John H., Zeeland.
 Pierce, Abbie, Ypsilanti.
 Pierce, D. C., Decatur.
 Peirce, Eugene F., Ludington.
 Pinvey, Kate M., Grand Rapids.
 Platt, Effie, Reed City.
 Potter, E. A., Vanderbilt.
 Poud, J. V., Grand Rapids.
 Philipps, J. B., Holt.
 Plunkett, E. M., Ovid.
 Preston, Nina, Ionia.
 Preston, Hattie, Ionia.
 Putnam, Daniel, Ypsilanti.
 Prescott, E. D., Ravenna.
 Quackenbush, E. J., Cedar Springs.
 Rainsborough, Rebecca H., Muskegon.

Ramedell, Ella, Big Rapids.
 Ranney, Daisy, Lowell.
 Ranney, Mabel, Lowell.
 Randolph, Mrs. W. A., Grand Rapids.
 Ransom, Clara, Grand Rapids.
 Ream, Myrton, Pottsville.
 Reed, Abbie, Howard City.
 Reed, Maude, Howard City.
 Reed, Sarah A., Grand Rapids.
 Rice, Emma, Lawrence.
 Richards, Vera, Rockford.
 Richmond, Miss C., Grand Rapids.
 Richmond, Stella, Oakland.
 Roberts, J. W., Paw Paw.
 Roche, Mrs. Mary.
 Rockwood, Francis, Whitehall.
 Rork, Clara, Grand Rapids.
 Russell, E. M., Battle Creek.
 Ryman, Mrs. Elsie, Grand Rapids.
 Sage, W. V., Hartford.
 Sauers, Helen, Grand Rapids.
 Saur, A. H., Kent City.
 Schiller, J. D., Niles.
 Sage, Mrs. W. V., Hartford.
 Sanborn, Jno. H., Clio.
 Satterlee, Ophelia, Kalamazoo.
 Sawyer, Emma, Gladwin.
 Sears, Wesley, Jackson.
 Scott, Kate, Nuncea.
 Sheckell, Cilia, Grand Rapids.
 Sill, J. M. B., Ypsilanti.
 Skinner, J. L., Mount Pleasant.
 Smith, Etta, Frankfort.
 Smith, Clara, Frankfort.
 Smith, Julia A., Schoolcraft.
 Smith, E. E., Chicago, Ill.
 Smith, Mrs. E. E., Chicago, Ill.
 Smith, Miles L., Petersburg.
 Smith, A. H., Grand Rapids.
 Smith, C. E., Schoolcraft.
 Smith, Daisy, Lowell.
 Smith, Elsie, Grand Rapids.
 Smith, Emma, Grand Rapids.
 Smith, Miss E. R., Grand Rapids.
 Smith, F. D., Vermontville.
 Smith, Mrs. F. D., Vermontville.
 Smith, Lora, Grand Rapids.
 Sooy, Mrs. Nettie, Wayland.
 Stark, Stella L., Grand Rapids.
 Stewart, L. H., Niles.
 Stittson, F., Fremont.
 Stoddard, Leora, Palo.
 Stower, Nellie, Three Rivers.
 Sutton, Nellie, Detroit.
 Scott, Chas., Holland.
 Seelye, Helen, Eaton Rapids.
 Shackelton, Cora, Ludington.
 Shaw, Winnie, Lowell.
 Shear, Kittie, Harrisburg.
 Sheridan, Agnes, Perrenton.
 Sheridan, Alice, Perrenton.
 Shultes, Florence, Traverse City.
 Shialer, Clara, Caledonia.

Schurtz, Orr, Charlotte.
 Side, Nettie, Kent City.
 Slauson, H. M., Coldwater.
 Slauson, Mrs. H. M., Coldwater.
 Slayton, Ivy, —.
 Spencer, Ruth, Austerlitz.
 Stafford, M. E., Zilwaukee.
 Stanton, N., Beaverdam.
 Stuffer, Clara, Gooding.
 Stauffer, Miss R., Gooding.
 Stegink, Benj., Drenthe.
 Stephenson, Mrs. Ella, Grand Rapids.
 Sterling, W. D., Hastings.
 Stevenson, Retta, Ballards.
 Stevenson, Anna, Ballards.
 Stout, Amanda, Grand Rapids.
 Straham, Margaret, Grand Rapids.
 Straight, Eugene, Carson City.
 Streng, Frances, Grand Rapids.
 Streng, Gertrude, Grand Rapids.
 Strong, E. A., Ypsilanti.
 Stroup, F. E., Midland.
 Stroup, Mrs. F. E., Midland.
 Sweeney, I. B., Burr Oak.
 Tate, Rachel, Benton Harbor.
 Thompson, E. C., Saginaw.
 Taylor, A. W., Nunica.
 Taylor, F. M., Albion.
 Taylor, May, Dennison.
 Terrell, Alice, Ludington.
 Taber, Ella, Grand Ledge.
 Thompson, Jas. H., Evart.
 Travis, Jerome, Alma.
 Towers, J. M., Chicago.
 Tuttle, O. G., Elm Hall.
 Thompson, Georgia, Engleaville.
 Trumball, Myrtie, Lowell.
 Thurston, Lillian, Grand Rapids.
 Vanderwalker, Nina, Ypsilanti.
 Van Valkenburg, Effie, Grand Rapids.
 Wade, C. G., Elm Hall.
 Wagner, J. L., Grand Ledge.
 Ward, Evelyn, Grand Rapids.
 Walkely, Addie, Grand Haven.
 Walsh, Meillie, Bismark.
 Waterbury, H. S., Sparta.
 Wells, F. M., Concord.
 Witherbee, Miss A., Schoolcraft.
 Wheeler, Della, Vermontville.
 Wheelock, Clara, Lyons.
 Whetmer, Jennie, Paw Paw.
 Wickham, F. O., Frankfort.
 Winters, Frances L., Hesperia.
 Wooden, M., Portand.
 Woods, Mrs. E., Le Roy.
 Woodman, Clara, Ann Arbor.
 Wright, Phebe, Mattawan.
 Waldo, Belle, Eaton Rapids.
 Watson, John H., Dutton.
 Wilson, E. A., Tecumseh.
 Winston, R. W., St Johns.
 Witmore, Mrs. M. B., Altona.
 Yntema, D. B., St. Johns.

PAPERS DELIVERED AT THE TEACHERS' ASSOCIATION AT GRAND RAPIDS, MICH., DEC. 22, 1890.

THE MICHIGAN BOY.

BY J. G. PLOWMAN.

The north bound train had halted in the beautiful little city, Albion, Mich., the good byes were said, the greetings were exchanged, and we were moving slowly along toward the capitol city.

"Rather not be in that man's place" said a solid old farmer, as he directed attention towards a dot of humanity climbing up near the top of the stand pipe.

"Some workman," said a commercial man, sitting near him.

"Fraid that man will fall," said a kind old mother.

"It's a boy" ejaculated twenty voices. And sure enough the Michigan boy had "just for the fun of it" hurried to the top of the high tower, and stood swinging his hat at the receding train.

It matters little where we are or what are our needs the omnipresent boy is there, ready for business.

"Shine?" Greets us on every hand from the hotel corridor to the "Third house of Congress" while every stroke that polishes the shoes, brightens the wits of the young savant.

"Paper Sir," is our hourly salutation from ten thousand midgets of Michigan's future nobility.

It is the boy who responds to the call of the bell, delivers our goods, carries our mail, runs our errands, and is general roustabout for everybody—the servant of *all*, but the *slave* of none.

In our theaters ready to minister to the comforts and enjoyments of every attendant, or to do the beck and nod of each performer.

At our places of public resort, watching for a chance to serve any one—for a nickle.

In the circus, anxious to lead the horses, ride the elephant, or fan the giant—anything for a ticket.

At the ball games, ready to catch "flies," or to run down the "fouls"—If only the captain will see him.

In our homes from garret to cellar. Are you lovers? The "walls have ears"—but the boy carries them; "the windows have eyes"—set in the roguish face of a boy.

Go on with your sweet secrets; and when you think them known to just you two, the sharp eyes, and sharper ears, and still sharper wits of the boy divine the whole of the "old old story." He hectors, that he may test the loyalty of a friend; he torments, that he may enjoy the strength of a sister's love; he provokes that he may revel in the unbounded fidelity of a

mother's affection—and yet what are our homes without the Michigan boy. Give us his clear ringing laugh and his whistled “Yankee Doodle” and you are welcome to your gets of “Spitz” and cats and poodles.

Do you know that many Michigan women of comparative culture and refinement are unworthily bestowing upon cats and curs the affection due the fatherless and motherless boys of our State?

Do you know that in our State School at Coldwater, there are today one hundred homeless boys, who ought to be in as many boyless homes?

There are just home roofs enough in Michigan to shelter all of her children. There are just husbandmen enough to provide for their needs. There are just mother hearts enough to take them all in. We halt in our way at the church. The boy rings the bell, pumps the organ, builds fires, sweeps, dusts, carries flowers, and is just as necessary to the life of the church, as circulation is to the life of the plant. No boy, no church. A friendly greeting of the boys will do more for the cause of the Master, than the most classical theological composition.

Minister, deacon, elder, common soldier, unbend, be boys again today. No greater work is yours than to save, for the work that is making the world better, the boys of your own congregation and neighborhood.

We believe that the salvation of one bright American boy is worth to the world more than that of many heathen.

Judging of the future from the past, the great thoughts that are to move and benefit the world, lurk in Caucasian skulls.

We must not pass by our own workshop—the schoolhouse. We hear the shouting before we get in sight of the tower. Everybody knows where the schoolhouse is, and when school is in operation, by the racket. The merry laugh, the hearty salutation, the lively games, the general hurrah, the tramp of the boys, the march of the girls, the commands of the teacher, the sweet songs of the morning hour, the reverential hush of the prayer moment, the hum of school business. Oh, dearest of memory's pictures! Bare thy walls of all save these, but let the dim eyes of old age grow bright again at sight of these. Let the aged teacher be young again amid these youthful scenes.

Widen your play ground, enlarge your hearts, sweeten your smiles, put warmth in your greeting. The boy—the Michigan boy is on deck today. The most interesting, the most valuable, the most difficult to understand of all the object lessons of all the ages.

Possibly those who have studied art until they have learned to love the chiseled beautiful forms, can appreciate the true sculptor's feelings as he looks upon his beautiful angel entombed in the rough mass of rugged rock. The inspired artist may see in his ideal the most beautiful form, but its only grace is in its sweet repose. It is silent, sightless, deaf and dumb. But the Michigan boy, our study, has a voice that is heard, eyes that see, ears that hear, a will that wills. He is not an inert piece of rock, nor a plastic mass of modeling clay, but a real live subject. Not a phase of humanity or a line of business or professional life but he imitates.

He preaches, he prays, he teaches, he pleads law, he farms, runs factories, operates great mercantile establishments, he is a clown, a commander of armies, an explorer, an engine, a balloon, a bear, an angel, a necessity, a nuisance, anything that human mind can conceive. And yet, fellow teachers, he is *our study*.

It is as much our business to discover his possibilities and to see that

they are perfectly brought out, as it is the work of the artist to personify his own conceptions in symmetrical forms of solid rock.

Important? The value of an article is known by the demand for it. Have we ever thought what demands our vice institutions are making upon the youth of our State? Who bids for the Michigan boy? Why, let all the boys of this vicinity sign and keep the pledge for twenty years, and your city would be saloonless.

A total abstinence from evil for two decades, upon the part of our young people, and vice in almost every form would be dead.

"Who shall have the Michigan boy—i. e., what principles shall *he* have?" is the most important question of this great commonwealth. Is it not possible that in our eagerness to discover the best methods of teaching, we have overlooked in a measure, the importance of the child? Have we not taught arithmetic too much, and studied the child too little—the *whole* child, his physical and mind self?

We would, if possible, exalt in your minds child life. The teacher ought to be more familiar with the phenomena of child life than he is with any printed book; and yet, how many thousands there are of us who know less about those we teach than we do about the books we teach them.

Oh, how long shall we grope in darkness? How many generations of immortal minds shall be distorted, or their genius defeated, before we shall conceive that "school was made for children, and not children for school;" that the great object in teaching is to help each child to a sound mind in a sound body, with all the noble, natural traits of the mind left *directed* and *inspired*, *not defeated*?

Important? Grand Rapids in one decade shall be a great city, of magnificent architecture, imposing buildings, beautiful streets, huge factories, a city of great wealth and commercial influence. Her citizens shall proudly boast of her beautiful parks and fountains, her art and literature, her libraries and galleries, her churches and schools; but that which shall decorate her with flags and cover her with banners, and raise up the voice of the city in a great shout, shall be the honor she shall show to her favored son "The Michigan Boy" of today—a man without a price, honest and upright; a man thoroughly loyal to every interest of his own State, but equally ambitious for the welfare of our whole country—an American. Why, in that elder day, "to be a Roman was greater than to be a king;" but now to be an American is greater than to be a Roman.

The Michigan girl? Why, she shall be his honored wife! And fellow teachers, they twain shall largely be the work of our hands, a work worthy the highest and holiest ambition, and one which requires for its completion, great skill.

Training for citizenship in a republic is the primary, intermediate, and highest work of a nation's teachers.

A government's constancy is not insured unless its sovereigns—the people—are sound physically, and right morally.

What can the physical condition have to do with the perpetuity of a nation's life and purity? Does not history teach that nations of best physique have been those of most wholesome thought?

Look at our people as they surge through the streets, crowd our courts, or gather in our places of amusement.

How many do we see free from physical deformities?

Turn to our courts of justice, to our great writers and orators, to our faculties of learning,

How many do we find with level heads—men who are right and logical? Is there any relation between the two? "A sound mind in a sound body" should be the motto of our republic's teachers. Will not the teachers of Michigan straighten up, take in a full breath, square their shoulders, level their heads, and introduce in every school in Michigan, at least, a semi-military system of physical culture, and in so doing, place a premium on form and strength? Does it matter to the State whether its citizens are athletic, strong and agile?

Then is it certainly the teacher's mission to teach to these ends.

However great the need of physical training, it is equally urgent that the powers of the mind should be symmetrically developed.

The very nature of a republic requires that its citizens should have a keen and accurate sense of what is right.

This power of the mind, germ like, as a natural gift, like the other powers of the mind, is susceptible of correct training. And on this training depends the nation's justice. This at once exalts conscience above every other power of the mind.

Is its proper training overlooked? Something is wrong, fundamentally wrong. Ample as our prisons and reformatory institutions are they are full; and vice and crime, finding it no longer necessary to skulk under cover of darkness, stalk defiantly through our country, and concentrate in our cities.

There is *little* lack of secular or scientific intelligence. From this point of view, there are both statesmen and philosophers in our prisons, men whose mind culture, save in this one respect, equals the intelligent *free* citizen.

As educators, let us give careful heed to two great primary truths—we cannot legislate wrong out of existence, and pure secular knowledge will not save men from vice.

These must be accomplished by properly training the child's sense of right. If this is true, fellow teachers, it imposes upon us, the greatest work of the century.

It tells us that we are the guardians of the nation's life, in the sense that we are the fashioners of the growing mind.

Disciplining as is the study of mathematics, culturing as is the study of the classics, enriching as is the study of the sciences, still infinitely more vital to the nation's life, is the study of that science which finds its climax in that wise saying, "Righteousness exalteth a nation."

THE INSTITUTE SYSTEMS OF OTHER STATES.

PROFESSOR B. A. HINSDALE, OF THE UNIVERSITY OF MICHIGAN.

The teacher's institute is a distinctive characteristic of the American system of public schools. It originated in the period, so happily named "The Educational Renaissance," that also gave the country the State board of education, the superintendency, State and local, the normal school, the public school library, and educational journalism.

Dr. Henry Barnard, the secretary of the Connecticut board of education,

realized as profoundly as any man of the time the deplorable condition of the public schools, and the deplorable deficiencies of their teachers. Defeated in a strenuous attempt to induce the State legislature to establish a State normal school, he asked himself the question whether anything could be done partially to meet the demand of the hour. The immediate answer to this question was the first institute, held in Hartford in 1839. In order to show, as he said in his circular, "the practicability of making some provision for the better qualification of common school teachers, by giving them an opportunity to revise and extend their knowledge of the studies actually pursued in district schools, and of the best methods of school arrangements, instruction and government under the recitations and lectures of experienced and well-known teachers and educators," Dr. Barnard called together, for a month's session, such teachers of Hartford county as were disposed to attend, organized them into an institute and, with several helpers whom he called to his assistance, proceeded to give them the much-needed instruction. Dr. Barnard apparently thought only of a provisional expedient. He intended to renew the effort to found a normal school; but in the meantime the institute would be a useful device. He builded better than he knew. His example was quickly followed. The first institute in New York, and the first that bore the name, was held in 1843. The first in Ohio in 1845. The first in Michigan in 1846.

At the first the institute was a purely voluntary agency, supported by individual sacrifice; but in time the State took it in charge, and it now has a status in many, perhaps in most State school laws. The National Commissioner of Education reported in 1887, that in the year 1886-7 there were held 2003 institutes, with an enrolled attendance of 138,946 persons.

The commissioner reported the same year that of 276,000 teachers in 28 states, 23,600, or less than nine per cent had attended normal schools. Also that all the normal schools and departments in the country enrolled but 49,500 pupils, and that they sent out but 4,065 graduates. Furthermore, his statistics warrant the statement that not less than 40,000 new teachers were needed that year to take the places of those who retired, and to fill new places created by the extension of public education. It seems clear, therefore, that the normal schools do not furnish, at least of graduates, more than one-tenth of the new teachers that are called for from year to year; and the conclusion is irresistible that all the professional instruction that the vast majority of public school teachers ever receive, outside of teachers' meetings, they receive in the institutes.

It is furthermore manifest that the per cent of teachers who have been educated in normal schools increases but slowly. The per cent of such teachers in the contingent of new teachers in 1887 could not have been much larger than in the whole army.

These facts show conclusively that the institute cannot be dispensed with; that the forces which created it will maintain it; that it is, and for years to come will be, the great means for carrying professional instruction to the teachers of the common schools. Indeed, the State and national reports alike point to an increasing reliance upon it. Surely, we have the most convincing reasons for making the institute the most vigorous and efficient educational agency possible.

Although the institute is now more than fifty years old, it has never been adequately discussed in any book or treatise. Should such a work appear, it would embrace the following features:

1. The history of the origin, development, and result of the institute;
2. A definition of its sphere;
3. An account of its means of financial support;
4. Methods of control and management;
5. Instruction, its character, range, methods, and agents; and
6. Reforms and improvements.

A very hurried and imperfect treatment of three of these topics is all that can be attempted in this paper. A few words will suffice for pecuniary support.

At first the institute was wholly dependent upon voluntary support. For some years the instructors either served gratuitously, or received a meager compensation from the slender fees of the teachers in attendance; such is still the case in some states, as in Missouri. But whenever the state has assumed the control of the institutes, it has made some provision, although by no means always adequate provision, for its maintenance. The principal sources of income in different states are state, county and city or town appropriation, normal school funds, fees paid by applicants for teacher's certificates or licenses, and fees paid by the enrolled attendants upon the institute. In no state, however, do we find all these sources of supply. The New England states generally make some state provision for their institutes. Every Pennsylvania county makes an annual contribution of \$200 to the county institute from the treasury, and every Indiana county a similar one of \$50. Wisconsin and Minnesota draw to some extent upon the normal school funds. Ohio depends upon certificate fees, and so does Michigan, except that the State treasury may be drawn upon each year to the amount of \$1,800. Mention may also be made of the Peabody Institutes of the South, that derive their support, in whole or in part from the Peabody fund.

Modes of controlling or managing institutes vary in different states. They depend somewhat upon the organization of the school machinery of the state, and somewhat upon the character of the institute. We may exclude from our survey town and city institutes, that are naturally conducted by the local authorities, and fix our attention upon state, district and county institutes.

In some states all the institutes, and in some part of them, are managed from the state capital. The state board of education, or the secretary, superintendent or commissioner, or the two together, exercise the power.

In 1885 the National Bureau of Education published a circular of information devoted to the Institute. Although the statistics presented in this circular are now old, they are, so far as I know, the latest of their kind; moreover, they will answer the present purpose, which is the illustration of methods rather than matter of fact exactness.

This circular contains a table of statistics of state and district institutes, embracing twelve States. In Alabama these institutes were held by the state superintendent, in Massachusetts by the secretary and agents of the state board of education; in Arkansas, Florida, Minnesota, Nevada, New York, North Carolina, Rhode Island, South Carolina and West Virginia, by conductors appointed by the state superintendent or commissioner; and in Texas by conductors appointed by the state board. It should be observed that some of these institutes, as in Massachusetts and New York, do not differ in character from the county institutes of other states.

The same circular shows who were the conductors of the county institutes in eighteen states. Alabama, the local school authorities; Pennsylvania,

Indiana, Nebraska, Nevada, North Carolina, the county superintendent; California, the county superintendent and the principal of the normal school; Illinois, the county superintendent and private instructors; Iowa, the county superintendent and school principals; Kansas, persons licensed by the state board; Maryland, the principal of the state normal school and members of its faculty; Michigan and West Virginia, conductors appointed by the state superintendent; New Jersey, under the direction of the state superintendent; Ohio, an executive committee appointed by the teachers of the county; Vermont, the state superintendent; Virginia, county and city superintendents; Wisconsin, state superintendent and normal school board. In nine of these states the county superintendent controls the county institute absolutely, or in conjunction with other school authorities. Of the remaining nine, Maryland, Ohio and Michigan had in 1885 no county superintendent. These facts show a strong, but by no means uniform, tendency, to give the county superintendent partial or full control of the county institute in states having such an officer. Six states that had such superintendents gave them no such power.

For the management of the state and district institutes in the proper sense of those terms, state control is admirably adopted. On this point there can hardly be two opinions.

But touching the management of county institutes, we cannot expect such unanimity of opinion. Much will depend upon the organization of the state educational machinery, upon the size of the state, upon the habits and traditions of the people and of teachers, and particularly upon the agents by whom the instruction is furnished.

Massachusetts can easily be surveyed from the state house; the secretary of the board practically holds his office during good behavior, and the State maintains a staff of trained agents that, under the direction of the board and the secretary, do most of the institute work. The Massachusetts system, so far as an observer at a distance can discover, is perfection itself for Massachusetts. To some extent these remarks also apply to New York; that state also maintains an institute staff. Still the much greater size of the state renders the plan less well adapted to New York.

Control by a state normal school board, as in Wisconsin, and by a normal school principal or faculty, as in Maryland, is a form of state control, and the remarks concerning Massachusetts and New York will largely apply to such cases. This plan is not likely to work as well as the Massachusetts plan, however, unless the State executive school officer is a member of the board.

The Ohio plan, that puts the management in the hands of the teachers of the county, and thus excludes the state commissioner altogether, save in cases where home rule fails, brings the institute near to those most interested in it, often the results are excellent, but not always; for sometimes the local management is ignorant, insufficient, and even dishonest. Still, this is the only plan that is consistent with Ohio ideas. From the very beginning that state has been chary of intrusting power to state executive officers. It is one of the four states in the Union that have never given the governors the veto power.

State control has little to recommend it in large states without a trained institute staff, especially if the superintendent holds his office by a political tenure. As a rule, he cannot have a personal knowledge of localities and of

men adequate to intelligent direction. He is compelled to rely largely upon second-hand information. The teachers feel that the seat of power is at a distance from them, and charges of personal influence and ring management are likely to circulate.

Only the county superintendent plan remains to be considered. This plan is strong where the state plan is weak. Taking everything into the account, this seems the natural and sensible method of control in a state that has established the county superintendency. Still, when there is one, it may be well to associate the county school board with the superintendent.

This branch of the subject may be dismissed with these additional remarks. Every one of the plans may work well when in good hands. No one of these possesses all the excellencies or all the defects. Education more than almost any other work in the world, is a matter of persons rather than of machinery.

The last and the most important of our three topics is instruction. To a considerable extent it has been anticipated, but not wholly so.

Upon the whole, the institutes of the country are taught by a rather miscellaneous body of teachers. In Massachusetts and New York the instruction receives its character from the professional staff; but even in these states, and especially in New York, much of the work is done by others, as superintendents, principals and teachers of schools. In the states where the normal school faculty or faculties constitute an institute staff, a still larger amount of work is commonly done by such hands. In such states as Ohio, Pennsylvania, Indiana and Michigan, the authorities in charge choose such assistants as they can secure. A few of these are retired teachers or educators; but the majority are men and women engaged in teaching, and are drawn from the public schools, the normal schools and the colleges, many of these instructors do work of the highest character. In most of these states, and probably in all of them, there is an excellent non-official institute staff; but it must be confessed that in these states, and in others also no doubt a considerable number of persons secure appointments who have no sufficient recommendations.

Argument is hardly called for to show that a state institute staff or faculty is highly desirable. The advantages of specialization declare themselves here as elsewhere. It cannot be questioned, that, as a rule, such a corps of experts will give unity, consistency, and strength to the institutes throughout the state. And if any object is more to be wished for than this one, it has not declared itself.

At the same time, it may well be questioned whether it would be wise to put all the institutes of a large state, into the hands of a professional staff, and particularly a small one. Such teachers are as likely as others to fall into routine and mechanism. If engaged in such work solely, or in such work supplemented by office duties, they will tend to separation from the practical work of the school. They will know pupils only through teachers. These objections will be overcome in a degree if the members of the staff are employed a part of the time in teaching or in supervision. These reasons show convincingly that the best interests of the institute demand the services of active teachers, drawn immediately from the schools, as well as of professional instructors.

On the other hand, it is of considerable advantage to teachers of ability and ambition to render institute services. They receive as well as give, or receive in giving.

Upon the whole, experience recommends a professional staff or faculty large enough to permit at least one member to attend every institute in the State, supplemented by the best qualified assistance attainable, and especially by teachers from the schools.

Much excellent work is now done in the institutes; but also much that is unsystematic, superficial, and inaccurate. Men who are ignorant, inexperienced, and even coarse are sometimes found where men of cultivation, high ideals, and capable of inspiring the spirit of scholarship are urgently needed. This is the institute problem of the day. It is a pressing problem, I shall not carry its discussion farther, except to add one thought.

Two years ago I suggested, in an article published in *The Ohio Educational Monthly*, what I called "the cycle plan" of organizing institute instruction. It embraced the two ideas of a course of work which should extend over two years, and the appointment of teachers with sole reference to their ability to present particular subjects. Two years was made the limit of the course, because it was not thought practicable to carry it beyond that point. But I had been anticipated. State Superintendent Draper, of New York, had already announced his intention to prepare for that State an institute course, which should be continuous from year to year and year after year for three or four years, thus obviating annual changes. He also gave his sanction to a plan to make the institute four weeks long. How much progress he made in carrying out this bold scheme, I have not learned. It is worthy of close consideration. It is obviously open to the criticism, if criticism it be, that there must be a succession of classes in a scheme so extensive. New York may be ready for it; but Ohio is not and Michigan is not. My conviction is that the two-years' plan is as extended as we are prepared for at present. But while we may doubt the practicability of Mr. Draper's comprehensive scheme, we are all deeply interested in his main idea. We must also approve heartily the words with which I close, "I consider the institute one of the most important helps of our work" he says, "and one which should be brought to the highest degree of perfection and efficiency possible."

OBJECTS OF THE MICHIGAN TEACHER'S INSTITUTE AT THE PRESENT TIME.

SUPT. T. L. EVANS, EATON RAPIDS.

It has been truly said that three kinds of knowledge are necessary to one who would teach well. 1. He should know the nature of the being to be taught. 2. He should clearly understand the knowledge, the facts or the subject matter to be presented to that being. 3. He should know the method of bringing knowledge and being together and the best order of doing the work.

This kind of knowledge that is involved in the last of these three great essentials, I maintain ought to be and I believe is, the objects of the Michigan Teachers' Institute at the present time. The verb to institute signifies to begin, to fix, to appoint, to set in motion, to train, to educate, to disci-

- f. It increases enrollment and attendance.
- g. Renders the change of text books easy and economical.
7. See that your records are properly kept, and make monthly reports, using this as one means to stimulate punctuality and constant attendance.
8. See that you have a program.
9. Grade your school. We insert a form in this circular for a general guide for you:
First Grade—1. First Reader; 2. Counting and learning figures; 3. Spelling from reader; 4. Writing all words of spelling and reading lesson.
Second Grade—1. Second Reader; 2. Oral work in four fundamental rules; 3. Oral work in language, including names of parts of speech; 4. Oral geography, reading the county;
5. Spelling with diacritical marks; 6. Writing.
Third Grade—1. Third Reader. 2. First book in Arithmetic; 3. Language book; 4. Elementary Geography; 5. Spelling book; 6. Writing book.
Fourth Grade—Fourth Reader; 2. Elements of Arithmetic including fractions; 3. Language lessons continued; 4. Elementary Geography continued; 5. Spelling; 6. Copy book.
Fifth Grade—1. Fourth Reader; 2. Elements of Arithmetic completed; 3. Language lessons completed; 4. Spelling; 5. First book Geography completed; 6. Writing.
Sixth Grade—1. Fifth Reader; 2. Practical Arithmetic; 3. Grammar; 4. Advanced Geography; 5. Spelling by dictation; 6. Writing; 7. Physiology.
Seventh Grade—1. U. S. History; 2. Practical Arithmetic completed; 3. Advanced Grammar; 4. Civil Government; 5. Book-keeping.
General Work—Oral Work twice each week either in Alcohol and Narcotics, composition, including letter writing on current events.
10. The especial attention of school officers is called to the law allowing the adoption of the township unit for school district. Discuss this topic. See what has been its result where adopted. Your Board of Examiners unhesitatingly recommend it to you. The world moves, and educational interests should keep pace with other interests. Be alive to your best good.

The teachers applying for examination March 6 and 7, March 28, August 7 and 8, and August 29, will be asked the following questions:

1. What educational papers do you take?
2. What works on education have you read?
3. What works on teaching do you own?
4. What secular paper do you read weekly?
5. What magazine do you take and read?
6. Who is your favorite author on pedagogy?
7. Who is your favorite author in general literature?
8. Are you a systematic reader?
9. Name three books suitable for 6th grade pupils?

E. H. WOODS, *Secretary*,
JAS. H. THOMPSON, *Chairman*,
A. B. PERRIN,
Osceola Co. Board of School Examiners.

OSCEOLA COUNTY.

I hereby submit the following report:

No. organized districts in the county	31
No. districts in which school has been taught	24
No. districts reported at last annual report	28
No. schools visited by secretary during the year	23

During the year Welch's Gradation Charts have been placed in the schools of this county, and we are getting the schools as near the grade as possible as fast as we can, but it will take some time yet to reach the grade.

A bill of \$29.45 to pay for charts will be brought before the board of supervisors at their next meeting.

Steps are being taken to organize a reading circle, the most of the

teachers seem to be willing to work for any advancement that presents itself to them.

What we most need in this county is experienced teachers.

Yours respectfully,

D. W. BLAKLY, *Secretary.*

PRESQUE ISLE COUNTY.

I send you herewith my annual statistical report, and beg to supplement the same by briefly enumerating some of the greater obstacles to efficient school work and educational advancement which in my judgment are met with in this county.

First among these is a lack of competent and experienced teachers, the poverty or parsimony of many districts impelling them to contract with inefficient resident teachers who will teach cheaply, rather than better teachers at higher wages.

Secondly, the indifference of parents, most of whom send their children the greater part of the time to the various sectarian schools of which we have quite a number, and in which the instruction is principally of a religious character and imparted in a foreign language.

Thirdly, the inclemency of our winters, when our schools are generally in session, combined with the great depth of snow, and the sparsely settled state of most of the districts render the attendance of most of the pupils quite irregular.

Fourthly, the length of the school terms are generally too short to result in any very marked advancement, and as new teachers are usually employed each succeeding term, much of the term is wasted in the process of forming such an acquaintance as will enable the teacher to adapt himself to the needs of the school.

But, notwithstanding these various hindrances I note many encouraging features. Institutes when held, are much better attended than formerly; and the special certificate nuisance with which we have been greatly bothered shows signs of abating; our schools are much better provided with apparatus than heretofore, and with better supervision, and the introduction of Welch's system of classification which we have just adopted, we hope for a year of increased usefulness.

Very respectfully yours,

GRIFFIN COVEY, JR., *Secretary.*

SAGINAW COUNTY.

I have the honor to herewith report the general condition and management of the schools of Saginaw county. I entered upon my duties with the determination to devote my whole time and talent towards elevating the standard of our schools. During the school year ending September 1, 1890, I have held two regular examinations and six specials. We have issued during that time six first grade certificates, nine second grade, one hundred and eighty-five third grade and nineteen special, and have only had occasion to revoke but one and that was a special.

We require for third grade and specials at least seventy-five in each branch with an average standing of eighty. Second grade, eighty-five with an average of eighty-seven. First grade, eighty-eight, with an average of ninety-three. Ability to govern, instruct and conduct a school in a profit-

able manner are also important qualifications. Applicants are requested to write with ink, to use legal-cap paper, number to correspond with enrollment card, to leave paper unfolded, to be prompt at each session and to remain in the room until the subject upon which they are working is completed. Answers to problems in arithmetic and algebra must be accompanied with solutions. The legibility and general neatness of papers are considered in marking them. The teachers of this county are taking unusual interest in matters relating to their profession. They realize that under the present law they must be successful in their work in order to retain their positions. Nearly every one in this county and many from the neighboring counties attended the institute which was conducted by Prof. Delos Fall of Albion College, assisted by instructors John O. Reed, and J. A. F. Strieter. It was the largest and most successful institute ever held here.

We have one hundred and forty-seven district schools with about one hundred and seventy school rooms or departments. I visited each department during the year, each visit lasting about one-half of a day, in order that I might become thoroughly acquainted with our schools. We have made great progress in the grading or classifying of the same and I have found the district school officers, with but few exceptions, ready to make much needed improvements and repairs to many of the school buildings immediately upon my suggesting the same.

A few of our district boards however, take into consideration the small amount of money required for improvements instead of the future good of our boys and girls. I am glad to state that this evil is rapidly dying out. I am encouraged to find after revisiting some of the schools that the teachers have had marked success by following my suggestions and that the frequent change of teachers is becoming beautifully less as time rolls on.

The text books are generally uniform and many of the districts have adopted the free text book system. Four new districts have been organized this year. Two brick school houses will be built during the ensuing year. Educational matters are in a very prosperous condition both in the cities and county which is due to a great extent, to the conscientious and faithful work of our teachers and the liberal support of the people towards the public schools.

The experience gained during the past year will aid me materially for better work during the year to come.

Very sincerely yours,

MYRON S. DODGE, *Secretary*.

ST. CLAIR COUNTY.

To the Chairmen of the Township Boards of School Inspectors:

GENTLEMEN—I take this opportunity to submit to you the following report:

SCHOOL BUILDINGS.

In former reports of the secretary of the board of examiners, your attention has been called to the large number of school buildings in the county wholly unfit for use. Although some improvement has been made in this respect, there still remain no fewer than fifty school houses which, in their

present condition, are not suitable for use. Plans and specifications for a number of new buildings, also plans for repairing several old ones have been furnished by this office. These plans include suitable methods of heating and ventilation, proper arrangement of blackboards, seats and windows, and the adoption of whatever devices, consistent with proper economy, that go to make a school building convenient, comfortable and healthful.

The secretary will furnish plans, free of cost, at any time to school officers or building committees who have new houses to build, or old ones to repair.

Sixty of the buildings in the county are not properly supplied with seats and desks. Many of the rooms are so poorly furnished in this respect as to prevent the pupils from assuming a healthful position while engaged in study. It is very essential that the attention of the people in these districts should be called to the importance of arranging school rooms in such a way that they will not tend to produce contracted chests and deformed bodies.

TEXT BOOKS.

But four districts voted at the last annual meeting to adopt the free text book plan as provided by the last Legislature. It was intended that this law should go into practical operation, June 30, of this year. Up to the present time but one district has provided books under the law.

While one hundred and ten of our schools have uniform text books in each subject, there is a great variety in use in the county. So varied are the books in the different districts, that it is an unusual occurrence to find two districts using the same books in all the subjects. This results in serious inconvenience and trouble. People in changing residence from one district to another are justly expected to furnish their pupils with a new series of books; if they do this, considerable expense, unnecessary under a better system is incurred; if they do not, the progress of the schools is seriously retarded by mixed text books.

I recommend that a committee be appointed composed of some of the members of this board, members of the examining board, and teachers from different parts of the county to recommend a uniform series of books for our schools. By this I do not mean that all districts are to change books, but many changes are made each year, and if the district boards will adopt a common series when changes are made, it will tend toward uniformity, and, in time be productive of very beneficial results.

In a few of the schools much inconvenience has been produced because pupils were not properly supplied with books. District boards should see that the progress of the schools under their charge is not retarded in this way.

GRADING THE COUNTRY SCHOOLS.

During the present year teachers' meetings have been held in different parts of the county for the purpose of discussing plans for grading the country schools, and securing the adoption of better methods of teaching. These meetings have been held on Saturdays, and the teachers deserve much credit for the interest they have taken and the assistance they have rendered in them. In each of these meetings the secretary has outlined a course of study for the use of the schools. At the State Teachers' Association held at Lansing last December, a committee of county secretaries was

appointed to act with the State Superintendent of Public Instruction for the purpose of outlining a course for the common schools of the State. Such a course has been prepared and as it is adapted to our needs it has been adopted for use in this county, and it will be supplied to the schools at the beginning of the next school year.

To grade and classify the country schools is simply to systematize the work in them; it means to have an ideal plan which is to be followed as closely as circumstances will permit, and to economize energy in such a way as to give the people the greatest amount of benefit for the money expended for educational purposes.

RECORDS AND REPORTS.

During the winter term I adopted a system of blank reports to be filled out by the teacher at the end of each term, one copy to be sent to the secretary, and another to be left with the director for the use of the succeeding teacher. By the use of this plan any teacher on entering upon her duties in a school is given the means of knowing just what work the different classes and individual pupils have done under her predecessor, just what program and plans were used, and thus is enabled to take up the work at once where her predecessor left off.

One of the obstacles to progress in the common schools has been the modification in plans of every new teacher whereby pupils are frequently taken over and over again the same subjects. A course of study followed will enable teachers to do thorough work, and this system of reports will make it possible for every teacher to take up the work where her predecessor left off, and thus secure the progressive development of the pupil. This system is to be modified somewhat next year by the use of a classification register which will last from five to seven years. At the beginning of each term, the teacher is to make out her arrangement of grades, classes, program, etc., in the register, and immediately report this on a blank furnished, to the secretary; at the end of the term she is to complete her register, and make a full report to the secretary. The register is to be left with the director for the use of the succeeding teacher. This plan gives the new teacher a complete record of the organization of the school under her predecessor, it enables the secretary to see at once any defects in the organization of a school, and hence, to advise teachers regarding remedies for these defects. In brief, it enables teachers to do their work much better, and the secretary to supervise much more effectively. Without this or a similar plan of records and reports, it would be impossible to carry out a course of study or to systematize the work of the country schools.

PUPILS' EXAMINATION.

During the latter part of the winter term I held a series of examinations for the purpose of testing the work of the pupils in the higher classes of the country schools. I furnished the questions, and with the assistance of teachers, conducted the examinations. After the examinations, which were mainly written, I looked over the work and reported to the individual pupils the standing attained. These examinations were well attended, three hundred pupils taking part in them. One hundred and ninety-three of the pupils examined passed a creditable examination and were awarded

certificates of merit. This certificate entitles the holder to the privilege of attending a county examination held in Port Huron. This year the examination referred to was held on Saturday, May 3. Sixty-seven eligible candidates appeared, forty-two of whom successfully passed a thorough examination over the common school subjects, and were awarded diplomas of graduation from the common school course of study.

This plan of examinations will undoubtedly be carried out next year as it has proved a wonderful stimulus to good work in the schools.

A circular to school officers will be issued in a few days, requesting them to close the fall term the Friday before the week in which Christmas occurs, and the spring term the last Friday in June. On these dates, questions for term examinations should be furnished by this office to every school.

With the aid of these examinations in addition to the reports and records above described, it is possible to carry out a course of study; without these aids it is not.

TEACHERS' INSTITUTE.

The institute held at Fort Gratiot commencing July 7, and ending August 1, was the largest ever held in the county; the enrollment reached two hundred and thirty. The teachers and pupils in attendance were enthusiastic and studious. We are under obligations to the Department of Public Instruction for sending us such able instructors as Prof. O'Keefe and Supt. Smith proved themselves to be.

More professional work was done in this institute than usual. From three to five classes per day were devoted to mental philosophy and to principles and methods of teaching.

APPARATUS.

Eighty of our schools are furnished with a dictionary, thirty-six with maps, thirty-one with a globe, and sixty with a physiological chart. It is needless to say that every school should be furnished with these articles. Many rooms are not properly supplied with blackboards although they can be made easily and cheaply, and are of the utmost importance. It is certainly poor economy not to furnish the articles named because they are tools to the teacher, and cannot fail to increase her efficiency. Arrangements have been made whereby all apparatus can be purchased of wholesale houses directly by school officers, at wholesale rates.

TREES AND GROUNDS.

During the first part of April, I published a pamphlet of Arbor Day exercises for the use of the schools in planting trees. The expense of printing and mailing this pamphlet was paid by Port Huron merchants who advertised in it. These exercises were used in many schools, and a large number of trees were planted.

In sixty-five districts the school grounds are in poor condition. In sixty-eight districts the out-buildings were not found to be in suitable shape. It is clearly the duty of directors to see that out-buildings are kept in proper condition, and it is to be hoped that more care will be exercised in this respect in the future.

PHYSIOLOGY AND HYGIENE.

In one hundred and twenty-five of our schools I found physiology and hygiene taught as provided by statute. In those districts which were delinquent in this respect, I invariably called the attention of school officers and teachers to the law requiring this subject to be taught. The statute makes it mandatory upon district boards to provide instruction in this subject, but fails to provide a specific penalty for non-compliance. It seems necessary for the Legislature to provide such penalty before the law can be fully enforced.

TEACHERS.

It is certain that the work of our teachers is improving from year to year. But few cases of failure have been found. From seventy-five to eighty per cent of our teachers are products of our common schools, hence it appears that the surest way to improve the teaching force is to improve the schools that produce the teachers. For this and other reasons heretofore given the coöperation of township and district officers is earnestly asked in grading and systematizing the work of the schools, and in carrying out effective plans of examination and supervision. It is evident to the student of education that a new era is dawning for the much-neglected country school. Let us be active agents in bringing about all reforms that tend toward a progressive and sure development of a good system of country school education.

Very respectfully,

E. F. LAW, *Secretary.*

WASHTENAW COUNTY.

I have the honor to submit herewith a manuscript report of schools of Washtenaw county for the school year ending September, A. D. 1890.

As secretary of the board of school examiners, I have visited every school in the county with the exception of three, which were not in session. School teaching, I find is treated by many teachers as a pastime or stepping stone to something else. It has been the endeavor of the examining board, for the past year, to weed out this class of instructors and make teaching a vocation instead of an avocation.

The greatest difficulty I find in the district school is a miscellaneous class of text books, thus necessitating in some schools a different class for each book. It has been my object to obviate this difficulty as much as possible, and I think by the aid of the State manual in the hands of each teacher in the county schools, that in the ensuing year the above obstruction to advancement will be overcome.

The village schools under my supervision are in excellent condition.

We have organized a teachers' association and reading circles, something that has not existed in this county in the past, and hope during the year, to be able to make them of great value to all our teachers.

I wish to add in conclusion that the schools of Washtenaw county take an impetus from the seats of learning within her borders, viz., the Michigan University and the State Normal, and as a general rule we have good teachers. The county board has been harmonious upon all measures, acting in concord to promote the general welfare of the school system.

M. J. CAVANAUGH, *Secretary.*

WAYNE COUNTY.

One hundred and sixteen schools have been visited and a report obtained from them. There are one hundred and fifty-one school houses in the county. There are eighteen townships, eleven graded schools and one hundred and forty ungraded. According to request of State Superintendent I received Welch's Classification Record on May 25, 1890. I introduced it in thirty schools before the vacation in June, 1890, and have received the most flattering reports of its efficacy. It is bound to revolutionize our ungraded schools and is of the greatest benefit both to teachers and pupils. There are one hundred and nine schools yet to supply with this record, and it is to be hoped that it will be properly attended to.

I am sorry to say that a great many districts make a practice of dividing their terms into three months, and employing a new teacher each term. This should not be, as it takes the children all their time to become accustomed to the ways and methods of their teachers, and leaves no time for their education. Welch's Classification Record obviates this to a certain extent inasmuch as each succeeding teacher follows the same method and is acquainted at once with the standing of his pupils. Another bad thing is the lack of ventilation in most of the schools. Only fourteen schools have proper ventilation, the balance have none at all or that which is entirely worthless and unhealthy. Just think of it! One hundred and thirty-seven school houses without ventilation. Is it any wonder we hear of so many children sick with various diseases. Another thing which shows gross carelessness (not to say criminality) on the part of district officers, is the disgraceful condition of many school outhouses or water closets. Only forty have good water closets, twenty-six are fairly good, and eighty-five are a disgrace to civilization. The officers of districts do not as a general thing make a practice of visiting their schools. I found only thirty-three visits by officers during the year in the county. No wonder our schools are not a success when district officers will put teachers in schools and never think of them until it comes time to hire again. No wonder the most of our teachers are below par in other counties as they are left entirely to their own resources. The remedy is, elect men to district offices who have an interest in the public schools and will attend to them properly. Do not elect men who take office for the purpose of putting a relation or friend in a position to live off the public without giving a fair equivalent. There has been issued during the year, four second grade certificates, two hundred and thirty-one third grade certificates, and four special. Four hundred and eighteen dollars and fifty cents institute fee has been collected and paid over to the county treasurer during the year. There are two hundred and fifty three legally qualified teachers in the county, one hundred and fourteen persons make teaching a permanent occupation. Average wages for males \$42.00 per month, for females, \$19.50. The average number of pupils to each school is fifty-four. Fifty-eight school houses have good fences around them, sixty-eight have good yards, forty-four yards are ornamented with trees, seventy-four have good wells, eighteen schools have maps, twenty-two have globes, forty-seven have dictionaries, sixty-eight have good seats, sixty-three have good blackboards, ninety schools showed very good order, eighty-six have introduced civil government and eighty-two physiology and hygiene, while forty-six have special reference to stimulants and narcotics, twelve townships use Harper's system of school books, six townships are badly mixed, fifty schools

have good libraries, forty brick school houses and one hundred and eleven frame. The schools require close attendance both from county and district officers. Our system has been too lax. The ability of teachers should be scrutinized more closely and the drones weeded out. The people should be educated in the election of their county school and district officers. None but men having children to send to school, or who are naturally interested in school work should be elected to school office. Teachers should not be changed so often, and care should be taken in selecting them. There are twelve normal teachers employed and they are giving splendid satisfaction and doing noble work, as are also two teachers holding State certificates. The schools show a decided tendency to improvement and with closer supervision will no doubt advance rapidly. My thanks are due the board for courtesies and material assistance rendered during the year.

Respectfully submitted,

JAMES E. W. LUMLEY, *Secretary.*

WEXFORD COUNTY.

Herewith find annual report. This closes my second year as secretary. I have visited all the schools of my county at least once during the year; several twice and some more often. In addition to the statistics that I am required to gather, I carefully note the general deportment of the teacher and school; the teacher's manner of imparting instructions. When I visit a school I take with me a list of names of all the children in the district taken from the director's report, compare it with the teacher's daily register to find how many children are attending school and how punctual they are attending. I have put the new Course of Study and Webb's classification register in all the schools. I explain both to the teachers and find, without exception, that teachers and school boards like this new order of school supervision. I require monthly reports from my teachers, giving me the facts as to attendance, cases of tardiness, some things as to the kind of work done, and ask for any aid that I can give them.

While I do not make my visits a kind of teacher's institute I do, when I find the teacher not doing her work to the best advantage, give her a better method. I talk to all the school, commend what is good, point out where they can better their school, and secure their co-operation with the teacher to make their school perfect.

H. C. FOXWORTHY, *Secretary.*

STATE MANUAL

AND

COURSE OF STUDY

FOR THE

DISTRICT SCHOOLS

This manual has been prepared with much care to meet a want that has for years been growing in the minds of teachers and friends of education. It is confidently hoped that the hearty co-operation of Secretaries and Boards of Examiners and all school authorities will be given in this attempt to effect a more thorough organization, and greater uniformity in the schools of our rural districts. There has been no generally accepted system of registration or uniform course of study such as is now presented in this Manual, and printed in Welch's Register for convenience and a better preservation of the same.

This method has been adopted in several States and the very best results are already beginning to be realized. The register prepared by Mr. Welch is the simplest and most complete that I have ever seen; and with the publishing in it of our course of study, suggestions, schedule of recitation, etc., the expense is very moderate, as it contains space for recording the essential facts of school work for a period of eight or ten years. The cards of promotion, reports and certificates with the course of study will be less expensive to the counties than the amount of printing often required and authorized by law for the use of Secretaries of Board of Examiners for one year. Will not every Secretary do all in his power to give this plan of organization a thorough trial? I most earnestly urge every Secretary to a careful study of this course of study and plan of registration so as to be prepared to give a thorough explanation of its use to the teachers at the Institutes.

J. ESTABROOK,
Superintendent of Public Instruction.

PREFACE.

At the annual meeting of State secretaries held in Lansing, Dec. 25, and 26, 1889, a resolution was unanimously adopted, providing for a committee of five to prepare a State manual and course of study that should be uniform for all the counties of the State, the same to be submitted to the State Superintendent of Public Instruction for his criticism, revision and approval, and by him published for general distribution.

This course is the result of that committee's labor. In its preparation they have consulted manuals already published by various secretaries in this State, as well as many others now in use in neighboring States. At the same time, they have advised with secretaries throughout the State with the desire to make this course adapted to all the counties, keeping in mind that their wants and conditions vary somewhat. The course is offered, therefore, with the hope and sincere belief of the committee that it may be readily adapted to the schools of any county.

ORR SCHURTZ, *Secretary of Eaton County,*
C. L. BEMIS, *Secretary of Ionia County,*
R. A. CULVER, *Secretary of Calhoun County,*
ASHLEY CLAPP, *Secretary of Kalamazoo County,*
P. M. BROWN, *Secretary of Mecosta County.*

INTRODUCTORY.

This manual has been prepared with one great object in view,—to enable the children of the district schools to follow from term to term and from year to year a plain, simple, *progressive* line of study that shall give them in the end a good, common school education. Its constant aim throughout is:

FIRST.—To introduce nothing not already taught in these schools.

SECOND.—To make the classification as simple as possible, easy for the teacher to understand and follow, and to lighten his labors.

THIRD.—To regulate the steps from grade to grade so that pupils shall be interested and kept in school, encouraged and credited for work done, and that the usual waste of time and aimless work resulting from frequent change of teachers may be reduced to a minimum.

FOURTH.—To put all the school work of the county on one common plan, so that methods used in teaching the various branches, amount of work accomplished, the system of reports, records, etc., may be the same.

FIFTH.—To make the work of supervision stronger and more effective, and to enlist the interest and sympathy of parents and school officers by making them better acquainted with what the schools are endeavoring to accomplish for their children.

PLAN OF THE COURSE OF STUDY.

The course of study is divided into eight grades, or years, each grade occupying one year. The average number of months for the school year in district schools throughout a county does not exceed eight. Each year's work, in consequence, has been arranged with this in mind.

To enforce the course of study, a system of examinations for each term is strongly recommended.

Examination Questions based upon the requirements outlined in the various grades should be printed by the secretary and sent out to the teachers in sealed envelopes to be written upon during the last week of the term. Final examinations for pupils should also be arranged for.

In addition, teachers should have written examinations or reviews for their schools monthly.

THE DAILY PROGRAMME.

The following classes are all that should be found in the average school of from thirty to thirty-five pupils. Often they can be reduced.

Reading.—Chart, first reader, second reader, third reader, *two* recitations each, daily. Fourth and fifth readers, *one* recitation each daily.

Spelling.—Two classes, one recitation each, daily. (In primary grades, teach spelling in connection with reading.)

Language.—Two classes, one recitation each, daily. (In chart, first and second reader classes, teach language in connection with the reading.)

Penmanship.—One class *daily*.

Arithmetic.—Four classes, one recitation each, daily. One primary, two intermediate, one advanced.

Geography.—Only two classes, one recitation each, daily.

History.—one class *daily*.

Civil Government.—One class *daily*.

NOTE.—By following directions as given in the manual in the grades where Geography, History, and Civil Government are outlined, it will be found that much of the work of these three may be combined, and the number of daily recitations reduced.

Physiology.—One class, one recitation *daily*.

EXAMINATION OF PUPILS.

There should be a regular system of examinations by the county secretary, by means of which he may judge whether the course of study is followed, and whether teachers are doing satisfactory work. Without these examinations at regular intervals some teachers will give the course either a half-hearted support, or none at all. Then, also, the knowledge on the part of pupils that they are to be tested on the work here planned, will interest them in it and make gradation popular.

It is therefore recommended that just before the close of each term secretaries prepare sets of test questions covering the work that should have been done by each grade during the term, place them in a sealed envelope, put this inside a larger one, and mail to each teacher, with directions not to open the envelope containing questions until the day of examination.

Upon the day of examination, let the pupils choose three of their number to open the sealed envelope, and sign their names to the blank found with the questions, which states that these examination questions have not been opened or tampered with. When the examinations are completed the teacher will mark them, after which the papers of each grade are to be securely fastened together and all kept in the teacher's desk for the secretary's inspection. All standings are also to be entered upon the classification record. This is the plan now in use in several States. *These papers, the classification record, and daily register*, the secretary will carefully inspect while visiting a school, and he should accept no excuses for failure to have them ready for him.

THE EXAMINATION PAPERS.

1. Place the name of the study at the head of the paper, and half way across the page. The pupil's name on the next line below, and at the right hand margin.

2. Number the topics by placing Roman numerals between them, half-way across the page. Leave at least one vacant line between topics. Use

legal cap paper. Write upon the paper so that the red line is always at the left. Do not write upon the margin at the left of the red line.

AMOUNT OF WORK BY TERMS. HOW ARRANGED.

In the back part of this manual is a form for giving a tabular view, *by terms*, of the whole course of study, as previously outlined in detail. It is placed there as a *model* to be patterned after by each individual secretary who may wish to fix the exact point or page to which work is to be carried each term. The work for each year as arranged in this manual has been divided into terms *whenever this could be done satisfactorily*. But it had to be borne in mind constantly that all manner of text books are used in the different counties, and all do not cover the ground in the same order. Therefore, to provide against this difficulty, this scheme was arranged. By it every county may divide each year's work into terms, to cover an exact number of pages in the text-books. The secretary may arrange a similar tabular view of the course, naming each text-book and putting in its proper column the number of the page to which each class is to advance during each term. He may then have this printed, and paste it in the manuals before giving them to teachers. It can be done at very small cost. By glancing at this table a teacher can tell in a moment, with classes that have books, just how much each grade must accomplish during any term. The table should be arranged so that each year's work, as laid down in the manual shall be covered.

COURSE OF STUDY.

FIRST GRADE—FIRST YEAR.

TEXT-BOOKS.—First reader.

APPARATUS.—Slate, pencil, sponge and rule.

WHAT TO TEACH.

Reading.—First reader and supplementary reading.

Elementary sounds.—The long and short sounds of vowels.

Spelling.—From reader and other class exercises.

Penmanship.—With reading, spelling, and language.

Language.—With the reading.

Numbers.—Combinations to ten.

Drawing.—Lines, and their combinations.

READING.

Classification.—Reading may be divided into primary, intermediate, and advance.

The primary includes the first three books with supplementary reading; the intermediate, the fourth and the fifth with supplementary reading; the advanced, a careful study of short selections from American and English authors, and stories from ancient classics.

PRIMARY READING.

Object.—The object is to teach to read from the printed page. When a child enters school he has from three to six hundred words as his spoken vocabulary. These words he knows by sound. The time has now come when the eye should be trained, and the words of his vocabulary known by sight.

Our work then is to make the transition from the spoken to the printed word.

FIRST READER.

Class Work.

Preparatory.—The first thing to be done is to get the child to talk. When he is free from the embarrassments of his new surroundings, fix his attention upon some object and have the crayon say the word.

The words put upon the board should be placed there by the teacher in print letters as nearly perfect as possible. With poor printing the pupils will make slow progress.

Teach in this way two or three common names. When they are learned well, the articles *a* and *the* should be prefixed, as *a boy, a cat, a dog; the boy, the cat, the dog*. The pupils should be taught to pronounce these groups as one word. Next teach several adjectives, as *a black dog, a white cat, etc.* When the above words are learned thoroughly, a few short sentences should be taught, as *I see, we see, you see, etc.* Arrange these words into as many different sentences as possible. Continue in this way until fifty or a hundred words have been taught. This will take from two to three months. The words should be taken from the reader or chart that the pupils are to use.

It will require a great deal of skill and ingenuity on the part of the teacher to develop these words in a proper manner. While this is being done the pupil should do a large part of the talking, and should use the foregoing and similar expressions before they are put on the board. The board work should be the talk of the crayon. That is the crayon repeats what the child says, and what the child says is the answer to the teacher's question.

Seat Work.—As soon as a word or two can be recognized at sight, the pupil should be required, for seat work, to build the words learned, using separate letters on bits of card board. Continue building words and short sentences learned on the blackboard until the reader is taken up; then commence to teach *script* letters.

Reader.—As soon as the required number of words has been taught in this way, and read by the pupils from the chart, or printed words made by the teacher on the board, the child should take the book; and if he has been properly taught from the chart and board, he is now able to read several pages of the reader at sight. From the start, try to have the children get a mental picture of what they read. Have them read in a natural tone of voice, speak promptly, and articulate distinctly. Up to the time of taking up the reader no new words can be learned by the pupil without the aid of the teacher. He should now be given the power to learn new words for himself. Hence elementary sounds, diacritical marks, letters, spelling, and writing should be taught.

Supplementary Reading.—A first reader from some other series than that used in the school, should be taken as a supplementary reader.

Busy Work.—Here, as elsewhere, the teacher should use his own judgment as to the amount of seat work and its nature. Every pupil should be kept busy at some profitable employment. Playing with sticks, marking with a pencil, or doing anything else with no definite aim in view should not be permitted.

Elementary Sounds.—After pupils have learned from fifty to one hundred words, give daily exercises in elementary sounds.

Take a word already well known, as *cat*, and treat it somewhat as follows:

Teacher, (pointing to the word) "what word is this?" Answer, "*cat*."

Teacher, "*c-a-t*," giving the sound of each letter slowly and distinctly.

Pupils, repeating the sounds after the teacher, "*c-a-t*."

Then the teacher should pronounce the word repeatedly, the pupils sounding the letters each time. Let the *pupils* also pronounce the word while the teacher sounds the letters. The pupils should then alternately pronounce the word, and sound the letters, as the teacher points from one form to the other, thus: *cat*, *c-a-t*, *c-a-t*, *cat*.

Follow with such words as *hat*, *rat*, *mat*, treating them in the same way.

Teach other sounds thus, as letters representing them occur in words.

Three Things to Observe.—1. The elements of the *spoken* word (sounds of the letters). 2. The elements of the *written* word (the letters). 3. The association of the letters of a word with their sounds.

By the above is meant that words should be spelled by sound and by letter.

Spelling.—Pupils should spell all the words in the reader and all familiar words in other class exercises.

Each syllable should be spelled separately, but not be pronounced.

Penmanship.—Pupils' slates should be ruled on one side about half way down, as a copy book is ruled.

The pencil should be long and sharp.

Be careful about the form of letters, the movement, and the holding of the pencil.

All written work should be carefully inspected by the teacher.

LANGUAGE.

In Connection with the Reading Lesson.—From the very first induce the children to talk *using full statements*. Frame questions so that pupils must use sentences in answering. Talk about familiar objects, things that interest them, such as animals, trees, plants, games, etc. Correct errors of speech. Tell short, easy stories and have pupils reproduce them orally. As soon as pupils begin to read from the book have them tell what they have read about. Do not put your language into their mouths, but lead them to use their own words. As soon as they can write, have them write on their slates daily all the new words in reading lessons.

Before the Close of the Year.—Each pupil should be able:

1. To write his own name well.
2. To write his postoffice address.
3. To write the name of his township, county and state.
4. To write the names of familiar objects.
5. To write lists of words from the reading lessons.
6. To write short sentences (of from three to six words).

NUMBERS.

Amount.—All possible combinations and separations of numbers from one to ten. Easy, practical examples, to illustrate and apply each step. Pupils taught to make all figures used, neatly.

Material.—Illustrate each step by using objects, such as marbles, nuts,

pieces of crayon, stone, beans, buttons, etc. Teach pupils to represent numbers on their slates by means of dots, lines, little squares, letters, etc., first showing them how to do this upon the blackboard. Teach pupils to spell and write words representing number.

First Step, Grouping.—Before attempting combination or separation, teach pupils to recognize groups of objects in *twos, threes and fours*. Thus, place two crayons in the hand and ask how many. Then three and four, changing these rapidly until they can name the number in each group. Vary this grouping by using *different objects*, holding up fingers, books, etc. Continue this exercise until pupils can recognize *instantly* any group of two, three or four objects. Do not attempt to teach the child to recognize any group composed of more than four objects. Have the children take several objects and separate them into groups of two, three and four. Teach pupils to measure each number by all numbers within itself. Let them make groups on their slates as follows:



(The four single objects represent the number four.)



(Here the *two groups* represent the number four.)



(In this the number four is represented by one group of three objects, and one single object.)

Then the teacher should make pupils see clearly that in each of these three rows there are four hats. In the first row there is but one hat in a place, in the second, two in one place (group), in the third, three in one place, and one in another.

Next lead them to tell what they see in these groups, thus: There are four 1's in four. There are two 2's in four. There is one 3 and 1 more in four. Two hats and two hats are four hats. Three hats and one hat are four hats. Four hats less two hats are two hats. Four hats less one hat are three hats. Four hats less three hats is one hat.

Again.—Hold in your hand two marbles (any objects). Ask how many marbles. Place two more with the first, keeping the two groups separate. "Now how many?" Pupils say, "four marbles." Then "two marbles and two marbles are four marbles." Place four in the hand. Ask how many. Pupils say, "four marbles." Take away two. "Now how many?" Pupils say, "two marbles." Then, "four marbles less two marbles are two marbles." Holding four, take four away. As before, pupils are led to say, "four marbles less four marbles are no marbles, or none."

Next, let a pupil take two marbles one time. Then two times. Lead him to say, "If I take two marbles two times (twice) I have four marbles." So taking four, he will say, "Four marbles taken one time (once) give four marbles."

Take four marbles *divide* them between two boys. Have the class notice how many each gets. Lead them to say, "Dividing four marbles between two boys gives each boy two." Also, "Four divided by two is two."

Making Figures and Writing Words That Represent Them.—Teach pupils to make neat figures, and to write the words that represent them, also Roman numerals. A device like the following will be found valuable.

one	two	three	four	five
I	II	III	IIII	IIIII
1	2	3	4	5
I	II	III	IV	V

As soon as pupils can make figures, explain and have them use the signs + and —, × and ÷ so that they may use them for seat work.

Develop all numbers up to ten as explained above with the number four being careful to use no combination that will introduce a number larger than ten. Give drills in rapid addition of figures in columns, no sum to be greater than ten. Thus,

				2	1	2
2	2	1	3	2	3	2
2	1	3	3	2	3	2
2	2	2	3	4	3	2
—	—	—	—	—	—	—
6	5	6	9	10	10	10

In same way give rapid drills in subtraction, thus:

4	6	8	10	5	5	9
—2	—3	—4	—5	—3	—2	—4
—	—	—	—	—	—	—
2	3	4	5	2	3	5

Multiplications:

4	3	5	2	2
×2	×2	×2	×2	×1
—	—	—	—	—

Divisions:

2) 4	3) 6	5) 10	2) 6
—	—	—	—
2	2	2	3

1 of 2	= 1
2 of 4	= 2
3 of 6	= 3
4 of 8	= 4
5 of 10	= 5

Making Tables.—During the last term of the year have pupils, for busy work, make tables of different combinations that shall equal the same number, thus:

Combinations that Equal Eight.

$$\begin{aligned}
 2+2+2+2 &= 8. \\
 3+3+2 &= 8. \\
 4+3+1 &= 8. \\
 5+2+1 &= 8. \\
 5+3 &= 8. \\
 4+4 &= 8, \text{ etc.}
 \end{aligned}$$

Arranged in columns:

2				
2	3	4	5	
2	3	3	2	5
2	2	1	1	3
—	—	—	—	—
8	8	8	8	8, etc.

In adding say, *two, four, six, eight*. Do not have pupils say, *two* and *two* are *four*, and *two* are *six*, and *two* are *eight*. The latter takes too much time and is *too slow*.

In the same way let them arrange tables in subtraction, multiplication and division on slates.

DRAWING.

Object.—To teach mathematical forms. This can be used for busy work.

Preparation.—Under penmanship it was recommended that the slates be ruled, on one side, about half way down, as a copy book is ruled. The other half should be dotted. To do this, check the slate with a rule and pencil, into quarter-inch squares. At the corners of these squares place a dot with an awl or other sharp pointed instrument. Now erase the checks made with the pencil and the dots will remain as guides for the pupil's work in drawing.

Each pupil should have a long, sharp pencil.

The Work.—While at work the teacher should develop:

1. The idea of the work to be done.
2. Rapidity in the work.
3. Neatness.

What to Teach.—During the first year the following should be taught:

Point.
Line.

1. Kinds:

Straight.
Broken.

2. Position of Lines:

Vertical.
Horizontal.
Oblique (right and left).

3. Combination of Lines:

1. Angles:

Right.
Acute.
Obtuse.

2. Triangles:

Right-angled.
Acute-angled.
Obtuse-angled.
Equilateral.
Isosceles.
Scalene.

3. Other Figures:

Letters.
Pictures.

NOTES.—1. Do not use a rule in drawing lines or measuring. Use it only to test the work.

2. Give correct pronunciation of names learned.

3. Have a plan for the work of each day.
4. To give a lesson will require about two or three minutes each day.
5. Pupils are not to learn the definitions of forms; but to know them when they see them, and call them by their right names.
6. No picture is to be drawn that requires more than three lines.
7. The dots are for guides in drawing.

SECOND GRADE—SECOND YEAR.

TEXT-BOOKS.—Second reader.

APPARATUS.—Slate, pencil, sponge, and rule.

WHAT TO TEACH.

Reading.—Second reader and supplementary reading.

Elementary Sounds.—As they occur in the reader.

Spelling.—From the reader and all class exercises.

Penmanship.—With reading, spelling and language.

Language.—With reader.

Numbers.—Combinations to twenty.

Physiology and Hygiene.—Oral.

Drawing.—Oral.

READING.

Teach the new words at the head of each lesson so that pupils will know them at sight, pronounce them correctly, and know what they mean. Be careful to secure correct pronunciation, and distinct articulation.

To teach pupils to know words at sight, point rapidly from one word to another.

To teach the meaning of words, require pupils to give the words in sentences, after they have been fully explained. Sentences to be both oral and written.

To secure correct pronunciation the teacher must be careful about his own pronunciation.

To secure good articulation, give frequent drills on elementary sounds and articulation exercises.

To be sure that pupils get thought, question them thoroughly on what they read.

Pupils should be required to commit to memory short selections to be recited before the class. These selections may be taken from the reader or from any source not more difficult than the reader, and should be thoroughly understood before they are committed.

Elementary Sounds.—Continue the study of elementary sounds as they occur in the reader.

Teach diacritical marks as necessary.

Drill on the sounds to become familiar with them.

Use Webster's Unabridged, or Academic Dictionary, as a guide.

Spelling.—Spell all the new words at the head of each reading lesson.

Have frequent reviews of words in the back lessons.

Spell the most common words in all class exercises.

Considerable time should be given to written exercises in spelling.

Penmanship.—Continue writing with a pencil.

Require neatness and correctness in all written work.

Movement, position, accuracy of form, and rapidity, should be carefully looked after.

LANGUAGE.

Combine with the Reading.—All language for the year is to be done in connection with the reading.

Encourage and Help Pupils to Put Their Thoughts into Statements.—

Talk about familiar objects, and lead pupils to make short, complete statements about them. Ask questions about these objects, and require short, but complete answers *in sentences*. At first these statements should contain but few words. If the objects used are *hat, book, pencil*, etc., the children should say: *It is a hat. It is a book. I have a pencil.*

Tell or read easy, short stories. Have these stories repeated, first, by answers to questions which you ask. Second, as wholes, in the child's own language.

Have them write sentences containing words from the reading lessons. Have them write statements which they have already expressed orally.

Teach the use of capital letters:

1. At the beginning of sentences.
2. In proper names.
3. The words I. and O.

Teach also the use of period and question mark at the close of sentences.

Caution.—1. Always see that written work is done neatly.

2. Always state plainly what pupils are to do at their seats.
3. Make lessons short and see that they are done as directed.
4. Do not neglect to have these exercises every day.
5. In oral reciting, require a *different statement* from each pupil.
6. Be sure to give pupils all the language work called for in their reading books.
7. Remember you can have no excuse for neglecting or refusing to do this work.
8. From time to time send samples of this work to the county secretary. It will aid you greatly in getting good work.

NUMBERS.

Numbers from ten to twenty, following the same methods as in the previous year, not, however, putting nearly so much stress on illustrating the different steps with objects. Where the first year's work has been well done, object work may be almost done away with. Review constantly, in connection with this year's work, all done in the previous year, making that in reality a part of it.

Count by 2's, 3's, 4's, to 20. Count by 5's and 10's to 100.

Read and write all numbers that come within the limits of this year's work. Roman numerals to fifty.

□ *Tables.*—Before the close of this year pupils should know thoroughly the following:

□ Table of U. S. coins to one dollar, and to make change to 50 cts; liquid measure to and including gallon; dry measure; number of inches in a foot; feet in a yard; things in a dozen; days in a week; months in a year; and to use these and apply them in practical problems. Also to use their fractional parts, as two quarts are one-half of a gallon; six things are one-half of a dozen; six months are one-half of a year, etc. Continue putting on slates tables of combinations (using addition, subtraction, multiplication, division), as directed in last part of previous year.

Seat Work.—Putting on slates tables last mentioned, and such as:

20 cts. = 4 five cent pieces.	1 gallon = 4 quarts.
20 cts. = 2 ten cent pieces.	2 gallons = 8 quarts.
15 cts. = 1 ten cent piece, and one five.	3 gallons = 12 quarts.
10 cts. = 2 five cent pieces.	$\frac{1}{2}$ gallon = 2 quarts.

Give constant drill in these, requiring neatness and accuracy.

Numbers Applied.—Do not fail to give countless examples applying all that is learned in combination of numbers, and in all tables.

Models for Application.—One quart of milk costs 5 cents, what will a gallon cost?

I pay \$3 a week for board, and \$1 a week for other things, what will I pay out in one month? Have these put on slates thus: 5 cts. \times 4 = 20 cts. $\$3 + \$1 = \$4$. $\$4 \times 4 = \16 .

Before the close of the year pupils should commit to memory thoroughly, in tabular form, those parts of the multiplication tables that do not carry the product above 20. Thus, for the 2's the table will be:

1 \times 2 = 2.	For the 3's.—1 \times 3 = 3.	For the 4's.—1 \times 4 = 4.
2 \times 2 = 4.	2 \times 3 = 6.	2 \times 4 = 8.
3 \times 2 = 6.	3 \times 3 = 9.	3 \times 4 = 12.
4 \times 2 = 8.	4 \times 3 = 12.	4 \times 4 = 16.
5 \times 2 = 10.	5 \times 3 = 15.	5 \times 4 = 20.
6 \times 2 = 12.	6 \times 3 = 18.	
7 \times 2 = 14.		
8 \times 2 = 16.		
9 \times 2 = 18.		
10 \times 2 = 20.		

So for each digit, keeping within 20 for the product.

PHYSIOLOGY AND HYGIENE.

Remarks.—In teaching this subject only common names should be used. Make the work as simple as possible. It should all be oral teaching until pupils reach the fifth grade, then a book should be used. This oral teaching should be done in connection with the reading and language and should be conducted in a conversational manner, the teacher asking questions and the pupils answering and telling their little stories.

Early Childhood:

1. A child's helpless condition.
2. Who took care of him and preserved his health?
Mother, father, grand-parents.

3. Dangers to the body.
Fire, some playthings, poisons, etc.
4. Care of the body.
Feeding, bathing, and clothing.

Black Board.

*My parents took care of my health.
I must now learn to take care of my own health.*

NOTE.—Use black board exercises, all that are necessary to impress facts.

Our Bodies:

I. What they do:
Think, talk, move, rest, sleep, eat, drink, breathe.

II. Parts:
Skin, flesh, bones.

NOTE.—1. Give instruction about bathing.
2. Explain fat and lean.
3. Experiment. Bone in acid or fire.

Black Board.

*Keep the skin very clean.
We must not let our bones bend out of shape, for they may stay.
Muscles grow strong by use.*

III. How made to grow:
1. By exercise, play and work.
2. By what we eat and drink.

Black Board.

*It is best to exercise in the sunlight and pure air.
Alcohol and tobacco cause disease and shorten life.*

NOTE.—1. Talk with pupils about food. Show that tobacco is not a food. Men live without it; other animals do not eat it; if eaten it makes one sick; it is a poison.

2. Water is the only proper drink; all animals drink it. Alcohol is not a drink; other animals do not drink it; if drunk it makes one sick; it is a poison.

3. Tell interesting facts in the history of tobacco and alcohol.

DRAWING.

Combination of Lines Continued.

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Quadrilaterals.
Square.
Diameter.
Diagonal. | <ol style="list-style-type: none"> 2. Polygons.
Pentagon.
Hexagon.
Heptagon. |
|--|---|

Rhombus.
 Oblong.
 Rhomboid.
 Trapezoid.
 Trapezium.

Octagon.
 Nonagon.
 Decagon.
 Undecagon.
 Dodecagon.

- NOTE.—1. Teach the above as directed in the first grade.
 2. Review the forms and names taught in the first grade.
 3. Besides the forms given above, pupils may make original designs as houses, dishes, pans, etc., anything that requires only straight lines.
 4. Do not require pupils to learn to pronounce or spell the words in the above list. They are to *draw* the figures, *only*.

THIRD GRADE—THIRD YEAR.

TEXT-BOOKS.—Third reader, language, and copy-book.

APPARATUS.—Slate, pencil, sponge, rule, pen, ink, and practice paper.

WHAT TO TEACH.

Reading.—Third reader and supplementary reading.

Elementary Sounds.—As they occur in the reader.

Spelling.—With reader and all other class exercises.

Penmanship.—Copy-book.

Language.—Oral.

Numbers.—Combinations to one hundred.

Physiology and Hygiene.

Drawing.—Oral.

READING.

See second grade.

In this grade require pupils to give the substance of the lesson in their own language, sometimes oral, sometimes written.

Supplementary Reading.—A third reader of another series.

Elementary Sounds.—See first and second grades.

Spelling.—See second grade.

Increase the amount of written spelling.

Have all geographical names, and names of persons spelled as they occur in the reader.

Spell words in classified groups as follows: The names of the different parts of a house as one group, the names of things used in the kitchen, garden vegetables, grains, animals, trees, etc.

There should be some study of primitive and derivative words. Some of the most common prefixes and suffixes should be learned.

This study of words can be brought in as a part of the language work.

Penmanship.—Copy-book; secure good movement, rapidity, and accuracy of form.

LANGUAGE.

Re-write short sentences, changing singular nouns to plurals, and plural nouns to singular. Make questions out of these same sentences.

Model:

The dog barks.
 The cow drinks.
 Change to—

The dogs bark.
 The cows drink.
 Does the dog bark?
 Do the cows drink?

Write sentences describing simple actions, sentences containing one or more given words, sentences with answers to what is seen in a picture, and what is told in reading lessons. Put new words from the reading lesson into sentences.

Teach correct use of *is* and *are*, *was* and *were*, *has* and *have*, *seen* and *saw*, *this* and *these*, *that* and *those*, etc., and the possessive form of the noun in written sentences.

Drill upon the correct use of such words as *to*, *too*, *two*; *no*, *know*; *there*, *their*; *right*, *write*.

Teach pupils to write names of the days of the week and months of the year. Also the use of the comma in a series, and in direct address.

Write short stories which the pupils have been taught to tell naturally. Dictate sentences and little stories, containing *short* sentences, for pupils to write.

NOTES.—1. In the writing of stories (little compositions) require correct form from the first.

2. Subject at the top of slate or paper, half way across the page, and underscored.
3. Indentation of first line of each paragraph.
4. Hyphen to show the division of a word at the end of a line.
5. A capital letter at the beginning of each sentence.
6. The proper terminal mark at the close of each sentence.
7. The pupil's name just below, and at the right of the production.
8. Send samples to the county secretary from time to time.

NUMBERS.

Numbers to 100, following directions of preceding years. Reading and writing numbers with not more than three periods. Multiplication tables all completed and *thoroughly known*. Roman numerals through one hundred. Use constantly all that has been learned in previous years in connection with this year. Give drill exercises constantly in *rapid* addition. Additions of numbers, not to exceed two periods, where carrying is involved. Subtraction of numbers not to exceed two periods, involving borrowing. Multiplying and dividing, first, with multipliers and divisors of one figure. When pupils can do this well, let multipliers and divisors contain two figures. Review and use tables already learned (U. S. money, liquid and dry measure, linear measure and time table). Teach pupils to use and understand thoroughly the terms sum, difference, minuend, subtrahend, multiplicand, multiplier.

Practical Examples.—Select and use *practical* examples, such as are met with in business life, for the purpose of *applying* what the pupils know, and are learning about the properties of numbers.

Writing and Reading Numbers.—In reading numbers, do not teach pupils to “begin at the right and numerate” until they reach the left hand figure. Teach the name of the first period, second, and third, saying nothing about the third, however, until pupils can read numbers of *two* periods readily. Take the number 325,132, for instance. Read 325 as if standing alone, then *name* it. (Whenever a number stands in the second period its name is *thousands*.) No directions need be given for 132, except to read as if it stood alone, without naming. When other periods are taken up, teach their names, then give these *names* to numbers that stand in them.

During the year give exercises in very simple fractions, involving such as $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{8}$, etc.

Analysis.—Require oral analysis, but make it very simple. Thus, if the problem be, “If Bessie have eight cherries and give three to Charlie, how many will she have left?” the analysis should be as follows: She will have the difference between eight and three cherries, which is five cherries. Do not require a lot of “if,” “therefore,” etc.

PHYSIOLOGY AND HYGIENE.

See notes and remarks, second grade.

Our Bodies, continued:

IV. Divisions.

Head, trunk, limbs.

NOTES.—I. Head.

1. A bony box called skull; what it contains. Show that the brain is the seat of thought; how alcohol and tobacco affect it.
2. Talk of the different forms in which tobacco is used.
3. Teach to preserve the teeth.

II. Trunk.

1. Divisions, chest and abdomen.
2. Explain the position of the chest, how it is made, what it contains, and what the organs it contains do.
3. Show the effects of alcohol and tobacco on the heart, blood, and breath.
4. Explain the position of the abdomen, how it is made, what it contains, and what the organs it contains do.
5. Show the effects of alcohol and tobacco on the stomach.

III. Limbs.

1. Explain the use of the muscles and bones.
2. Show the effects of alcohol and tobacco on the limbs, in the unsteady gait, and trembling of the hands.

DRAWING.

Curved lines.

1. Circle.
Circumference.
Diameter.
Radius.
Semicircle.
Arc.

Chord.
Segment.
Sector.
Quadrant.

2. Other figures.

Trefoil.
Quarterfoil.

- NOTES.—1. Teach the above as directed in the first grade.
2. Review the forms learned in the first and second grades.
3. In review, pupils make original designs, using both curved and straight lines.
4. Teachers should also dictate new designs, using both kinds of lines.

FOURTH GRADE—FOURTH YEAR.

TEXT-BOOKS.—Third reader, language, copy-book and arithmetic.

APPARATUS.—Slate, pencil, sponge, pen, ink and practice paper.

WHAT TO TEACH.

Reading.—Third reader and supplementary reading.

Elementary Sounds.—As they occur in the reader.

Spelling.—With reader, and all other class exercises.

Penmanship.—Copy-book.

Language.—Oral, book as guide.

Arithmetic.—Text-book. First book begun and completed.

Geography.—Oral.

Physiology and Hygiene.—Oral.

READING.

See second and third grades for methods.

Elementary Sounds.—See second grade. With this all the elementary sounds should be learned.

Spelling.—Same as second and third grades. Increase the amount of written spelling and diminish the amount of oral spelling.

Penmanship.—See third grade.

LANGUAGE.

Continue the Work of Previous Grade.—Write substance of the reading lessons, descriptions of pictures, and stories suggested by pictures. Write interesting stories told the class. Write sentences illustrating the meaning of words found in reading lessons. Write about persons and incidents brought out in reading lessons.

Abbreviations.—Teach use of the period in abbreviations, such as *Mr.*, *Mrs.*, *Dr.*, *Mich.*, etc., and with initials. Use of comma in contractions, as *I'm* stands for *I am*, *don't* for *do not*, *can't* for *cannot*, *I'll* for *I will*, etc. The use of quotation marks.

Notation and Numeration.—The study of these should aim at rapidity, so that pupils write or read without hesitation numbers of four periods, knowing the names of these periods, and the orders in the periods. Practice reading and writing numbers much.

Addition and Subtraction.—This will consume but little time, for pupils have had much drill in previous grades. Allow no counting on fingers, or by marks. Aim at speed and accuracy.

Multiplication and Division.—This work should complete and fix in mind all the drill that should ever be necessary for pupils. Give enough examples to secure accuracy and rapidity. Remember to *test thoroughly* the pupils' knowledge of multiplication tables. If they show any forgetfulness of these tables, review them daily, in connection with the other work.

Scheme for Division.—Many teachers have found the following plan a good one to make division plain and easy: First, write the dividend with the divisor at the left as usual. Then write out a table of products obtained by multiplying the divisor by each of the nine digits. Thus:

15	×	1	=	15
15	×	2	=	30
15	×	3	=	45
15	×	4	=	60
15	×	5	=	75
15	×	6	=	90
15	×	7	=	105
15	×	8	=	120
15	×	9	=	135

15	|	325,425	|	21,695.
		30		
		—		
		25		
		15		
		—		
		104		
		90		
		—		
		142		
		135		
		—		
		75		
		75		

By comparing these products with each partial dividend the pupil sees immediately what to write for the quotient figure. His multiplications are already made, so that no time is lost.

Winter Term.—The work of this, the winter term, (usually four months) should cover the following:

Factoring.—Make the distinction between prime and composite absolutely clear. Resolve numbers into composite, then prime factors. Have pupils name and write the prime factors of numbers to 100, and drill until no mistakes are made in recognizing them instantly. A simple and easy plan is to separate a given number into two large factors, readily perceived, and treat these similarly. Thus, take $72 = 9 \times 8$. $9 = 3 \times 3$. $8 = 2 \times 2 \times 2$. Then, $72 = 3 \times 3 \times 2 \times 2 \times 2$.

Fractions.—Addition, subtraction, multiplication, and division. This must be done too thoroughly. Much of reducing mixed numbers to improper fractions, and the reverse. Give much practice in adding and

subtracting fractions having common denominators, both oral and written, using only small denominators.

EXAMPLE.—Add $\frac{1}{4}$, $\frac{5}{8}$ and $\frac{3}{8}$; $\frac{3}{8}$, $\frac{5}{8}$ and $\frac{7}{8}$. In the same way subtract. Require all written work to be done neatly and accurately.

Spring Term.—Finish the book, reviewing as much of the previous term's work as possible.

GEOGRAPHY.

No book is to be given the pupil. Lessons all taught orally. Teach, [1] position, place, locating objects at hand, in school room and on school grounds, etc. [2] Direction—east, west, north, south; use these in describing location or place of objects near at hand and in sight. [3] Distance, taught by comparing nearness of objects to pupils, to each other, idea of foot, rod, mile, etc., brought out. [4] Map. Develop the idea by representing school room on blackboard. First draw the outline of the floor, on a scale, as one inch to the foot, have pupils measure length of room, and width, then represent these accurately, with proper number of inches. Locate, then, by accurate measurements, doors, windows, stove, teacher's desk, etc. [5] Draw map of school grounds, locating trees, school house and other points of interest. [6] Draw map of township and locate all the school houses, principal highways, streams of water, churches, etc. Drill pupils on these maps until they can locate these objects and draw the entire map. [7] With this township map develop idea of surface, level, hilly, etc. Also bring out idea of sloping surface, plain surface. [8] Idea of hill; represent it on blackboard. Hill and mountain, range of hills; streams of water, lake. [9] Draw map of county, on board, first in outline. Have pupils locate principal points of interest, such as in towns, county seat, streams, hills, lakes and ponds, etc. Then study the map with pupils until they are able to locate these when questioned, and are able to sketch the map. This gives them a knowledge of that portion of the country where they live, its surface, soil, etc.

Then draw out the following things about the township and county:

1. Trees,—kind.
2. Soil,—clay, sand, loam, etc.
3. Grains,—wheat, oats, corn, etc.
4. Vegetables,—potatoes, beets, etc.
5. Fruits,—apples, pears, berries, etc.
6. Foods.
7. Plants and products for clothing.
8. Animals.
9. Birds.
10. Reptiles, fish, etc.

PHYSIOLOGY AND HYGIENE.

REMARKS.—Review rapidly the work of the second grade and more carefully the work of the third.

The Work.—1. Give a general outline of the location and character of the brain and nerves.

2. Give a general outline of digestion; show some of the changes that take place in the food, and how the digested food enters the blood.
 3. Explain the heart and give a general outline of the circulation.
 4. Explain in a simple way the functions of the lungs and diaphragm.
 5. In each of the above show the effect of alcohol, tobacco and other narcotics.
 6. Teach in a limited way the eye and ear.
 7. Use blackboard exercises all through the work.
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FIFTH GRADE—FIFTH YEAR.

Text-books.—Fourth reader, language, elementary arithmetic, physiology and hygiene, copy-book, geography, and spelling-book.

Apparatus.—Slate, pencil, sponge, pen, ink, and practice paper.

WHAT TO TEACH.

Reading.—Fourth reader.

Spelling.—Spelling-book for first time.

Penmanship.—Copy-book.

Language.—Oral.

Arithmetic.—Second book, to decimals.

Geography.—First text-book.

Physiology and Hygiene.—Text-book.

READING.

Up to this time the object has been to teach to read. The work of the fifth grade should be more comprehensive. Besides continuing to teach to read, the study should assume more of a literary character.

Our primary object is now to cultivate a taste for good literature. Authors should be studied in a limited way. When, where, and how they lived. Some of their most important works should be discussed, and read if possible. Study carefully all the selections given in the reader. Here words should be studied, as synonyms, derivatives, and primitives. The most important historical allusions and rhetorical figures should be thoroughly understood.

Supplementary Reading.—A fourth reader from another series than that used in school should be used as supplementary reader. Require pupils to commit short extracts to memory, and to give the substance of what they read both orally and in writing as in the second reader. Pupils should now have free access to the dictionary.

SPELLING.

The spelling-book should now be taken. Spelling, mostly written. The meaning of every word should be known. This should be tested by requiring pupils to use the words in sentences after they have been fully explained. The sentences should be both oral and written.

Be thorough in pronunciation, articulation, accent, and syllabication. Teach to use the dictionary.

Continue spelling in all class exercises.

PENMANSHIP.

See third grade.

Be sure that the work is thoroughly done. Question carefully over the rules for making the letters, and require letter analysis.

LANGUAGE.

Continue written reproduction of reading lessons, short stories and descriptions. Reproduction in writing of gems of prose and poetry committed to memory. Rewrite in pupil's own language poetry found in reading lessons. Letter writing and business forms. Exercises dictated by the teacher, and written by pupils.

Continue drill in uses of period, comma, interrogation and exclamation point, apostrophe and quotation marks.

Give much drill on proper use of verbs in common use that are habitually mis-spoken and incorrectly used, such as *lie, lay; set, sit; teach, learn; did, done;* etc. Require much sentence writing in connection with these.

Nouns.—Teach pupils to distinguish and point out nouns. Show objects and have them named. Pupils write these names. Make lists of nouns from things about the school, from reading and other lessons.

A NOUN MAY BE THE NAME OF $\left\{ \begin{array}{l} 1. \text{ A person.} \\ 2. \text{ A place.} \\ 3. \text{ A thing.} \end{array} \right\}$ Proper.

Adjectives and Adverbs.—After the same manner teach adjectives and adverbs.

ARITHMETIC.

Second Book.—Beginning with the second book cover thoroughly everything to decimals. With books that give decimals before common fractions, change the order and teach common fractions first. Draw on different text books for supplementary work. Be thorough in definitions, rules and *analysis*. Too many pupils “finish” arithmetic mechanically, and have not learned to *think or reason*. Require reasons for solutions to be stated understandingly.

Fall Term.—Fundamental operations, definitions and rules. Factoring, common divisor, greatest common divisor; multiples, *common* multiples, *least* common multiples.

Winter Term.—Fractions through reductions, addition, subtraction, multiplication and division.

During this term teach pupils to make out bills of various kinds, such as bills of purchase, bills of sale, bills for work done, etc. Place on the black-board forms like those here given. Have these copied until the pupils are familiar with them. Then give examples that require these forms, and have pupils arrange them in neat, accurate shape, carrying them out in detail, receipting, etc. These exercises may be made a part of the regular language work during a part of this term.

BILL FOR SERVICES.

LANSING, Dec. 21, 1889

J. N. Wood,

To J. N. Weir,

Dr.

Oct.	15	To 1 day's labor hauling stone..... @ \$2.50		
		“ 2 days' use of team and wagon..... @ \$3.00		
Oct.	20	To 3 days' labor drawing lumber..... @ \$2.50		
		“ 3 days' use of team and wagon..... @ \$3.00		
Dec.	5	To 2 day's labor cutting wood..... @ \$1.50		
		“ 1 days' use of team drawing wood..... @ \$3.00		
		Received payment,		
		J. N. WEIR.		

PUBLIC INSTRUCTION.

BILL OF PURCHASE.

DETROIT, Feb. 3, 1890.

N. J. Squire.

Bought of Raynor, Smith & Co.,

Retail Grocers.

5 lb coffee.....	@ 35c.	
10 lb sugar.....	@ 7c.	
3 lb tea.....	@ 50c.	
5 lb rasins.....	@ 10c.	
5 lb rice.....	@ 8c.	
3 lb crackers.....	@ 8c.	
2gals. molasses	@ 45c.	
$\frac{1}{4}$ lb pepper.....	@ 50c.	
Received payment,		
RAYNOR, SMITH & Co.		

Spring Term.—During a part of this term use problems that give practice in articles of commerce bought and sold by the hundred weight, by the thousand and the ton, such as beef, pork, lumber, shingles, hay, etc. For the remaining part of the term, review fractions and apply them to practical problems.

GEOGRAPHY.

Pupils are now ready for the first text-book. Definitions should now be thoroughly taught, excepting definitions of mathematical terms, which should be delayed for a time. A globe should be had, if possible. Even a cheap one is better than none. With the globe in hand give lessons, endeavoring to impart to pupils correct ideas of the earth's surface, form, etc. Supplement this with use of an outline map of the world. Aim in these lessons only to give a clear outline image of the earth's surface, its continents, oceans, zones, etc. Keep an outline map before the class while giving these lessons.

Map Drawing.—Pupils should draw the maps they study, not by rule and measurements, but so as to give to them a mental picture of what is learned, and to impress it upon their minds. Each map is to be thoroughly mastered, studied and talked about until the child can shut his eyes and see it, and sketch it with crayon or pencil. First book half completed.

First Three Months.—First book to the map of North America.

Fourth Month.—Map of North America.

Fifth Month.—Map of the United States.

The Rest of Year.—The divisions of the United States, and review.

PHYSIOLOGY AND HYGIENE.

In the fifth, sixth, seventh, and eighth grades text-books should be used, a primary book with the fourth reader, and an elementary book with the fifth reader. The physiology and hygiene should take the place of the reading once each week during the last four years of the course. This work should not be simply reading, but as thorough a study of the subject as the scope of the text-book will allow.

SIXTH GRADE—SIXTH YEAR.

TEXT-BOOKS.—Fourth reader, language, arithmetic, physiology and hygiene, copy-book, geography and spelling-book.

APPARATUS.—Slate, pencil, sponge, pen, ink, and practice paper.

WHAT TO TEACH.

Reading.—Fourth reader.

Spelling.—Spelling-book.

Pennmanship.—Copy-book.

Language.—With text-book, or orally with text-book as a guide.

Arithmetic.—Second book. Decimals, measures of extension, weight capacity, etc., compound numbers, solid measure.

Geography.—Text-book. Review. British America, Mexico, Central America, South America, Europe, Asia, Africa.

Physiology and Hygiene.—Text-book.

READING.

See fifth grade for methods.

Spelling.—See fifth grade.

Penmanship.—See fifth grade.

Copy and fill out business forms in connection with arithmetic.

LANGUAGE.

Continue the work of the previous grade. Have pupils describe orally and in writing, journeys and pleasure excursions. Biographical sketches of prominent men whose names are met with in reading or other lessons. Geographical essays. Continued oral and written reproduction of reading lessons. Continue to teach *nouns, adjectives, adverbs*. Also during this year teach the *pronoun* and the *verb*, so that pupils are able to recognize and point them out quickly and readily.

Subject and Predicate.—Teach the two essential parts of the sentence, the subject and the predicate, so that pupils can point them out readily.

Do not yet make much use of formal definitions.

This work should be done thoroughly, so that pupils are prepared to begin the study of technical grammar with the text-book at the beginning of the next year.

ARITHMETIC.

Fall Term.

Decimal Fractions.—There is nothing difficult about decimal fractions when the decimal point is once understood. All operations, except the fixing of the decimal point, to be here used, pupils understand and are able to use. The one great thing for the teacher is to make clear and fasten in the pupils' minds the laws which fix the decimal point. They are *easy to learn and easy to understand*. The text-book makes everything clear. Let the teacher study how to teach it well, and all will be made plain to pupils. In pointing off in multiplication and division, *never* allow a pupil to guess at it. Constantly ask, "Why do you place the point there?" "Would it not be right to place the point here?" Compel pupils to give reasons (which is merely repeating the rules) until they cannot be deceived, and are proof against mistakes. Teach thoroughly how to reduce common fractions to decimals, with the same care about pointing off. Also to reduce decimals to common fractions. Apply decimal fractions to U. S. money in accounts and bills.

Winter Term.

If the fall term has not been long enough (not less than three months), to finish decimals, the work for this term will consist in learning and applying the tables of measures of extension, capacity, weight, time, etc.

Compound Numbers.—Exercises in reduction, addition, subtraction, multiplication and division.

Measurements.—Give much drill upon problems that relate to measurements of surface, such as plastering, carpeting, papering, land, etc.

Spring Term.

Solid Measure.—Board and timber measure, examples relating to measurements of bins, timber, walls, cellars, wood piles, areas and solids of all

kinds. Give a large number of practical examples that will make pupils entirely familiar with these.

Review the work of the previous term to fix it well in mind.

GEOGRAPHY.

During First Three Months.—Review the work for the first three months of fifth grade.

Fourth Month.—British America, Mexico and Central America.

Fifth Month.—South America.

Sixth Month.—Europe.

Seventh Month.—Asia.

Eighth Month.—Africa.

REMARKS.—Make but one class in geography for the fifth and sixth grades. After the first three months' work, which is the same for each year, it will make little difference whether the fifth grade pupils begin with North America, or with British America, Mexico and Central America.

PHYSIOLOGY AND HYGIENE.

See fifth grade.

SEVENTH GRADE—SEVENTH YEAR.

TEXT-BOOKS.—Fifth reader, language, advanced arithmetic, copy-book, geography, history, civil government, spelling-book, physiology and hygiene.

APPARATUS.—Slate, pencil, sponge, pen, ink, and practice paper.

WHAT TO TEACH.

Reading.—Fifth reader.

Spelling.—Spelling-book.

Penmanship.—Copy-book.

Grammar.—Text-book.

Arithmetic.—Percentage, commission, taxes, stocks, simple interest, true and bank discount, exchange, partial payments.

Geography.—Michigan, United States, South America, Europe.

Physiology and Hygiene.—Text-book.

READING.

See fifth grade for methods.

Continue giving and writing an outline of the lesson, and the study of words, historical allusions, and rhetorical figures.

All through the intermediate work require the committing to memory of short selections to be recited before the class or school.

Be sure that the reader gets a mental picture of what he reads.

SPELLING.

See fifth grade.

PENMANSHIP.

See third and fourth grades.

When pupils finish the seventh grade they should know, well, the elements and principles of penmanship, and be able to analyze all the letters of the alphabet.

GRAMMAR.

Use text-book. Begin with the simplest kind of a simple sentence. Teach carefully subject and predicate. Then modifiers of subject, modifiers of predicate. Proceed slowly, making each step very plain, requiring much writing of sentences to illustrate and fix in mind every principle. Adopt some simple, easy plan of diagram and use at once. After the simple sentence is mastered, go on to the complex and compound. Avoid, during the first year of this course, the tangling, perplexing, and obscure points of technical grammar. Strive to give pupils a clear understanding of the ordinary syntax of English grammar. If the text-book in use does not begin with the sentence, but with definitions, omit what precedes the sentence; begin with the sentence, delaying the parsing and the definitions until pupils have acquired some knowledge of analysis.

ARITHMETIC.

Fall Term.

Percentage.—Before beginning percentage give a few review lessons in decimals fractions.

NOTE 1.—All operations in percentage are only applications of decimal and common fractions to find—

1. A part of a number (to find percentage, having base and rate).
2. What part one number is of another (to find rate having base and percentage).
3. Of what number a given number is a given part (to find base, having percentage and rate).

Table of Equivalents.—

10 % = .10 = $\frac{1}{10}$	12 $\frac{1}{2}$ % = .125 = $\frac{125}{1000}$ = $\frac{1}{8}$
20 % = .20 = $\frac{2}{10}$ = $\frac{1}{5}$	37 $\frac{1}{2}$ % = .375 = $\frac{375}{1000}$ = $\frac{3}{8}$
25 % = .25 = $\frac{25}{100}$ = $\frac{1}{4}$	62 $\frac{1}{2}$ % = .625 = $\frac{625}{1000}$ = $\frac{5}{8}$
30 % = .30 = $\frac{3}{10}$	33 $\frac{1}{3}$ % = .33 $\frac{1}{3}$ = $\frac{1}{3}$
40 % = .40 = $\frac{4}{10}$ = $\frac{2}{5}$	6 $\frac{1}{4}$ % = .0625 = $\frac{1}{16}$, etc.

Solutions.—All solutions of problems should be based upon analyses already made familiar to pupils in operations in common and decimal fractions, and thorough explanations should be rigidly enforced. The ordinary *formule* should not be used until each principle has been made familiar by analysis. The formula should *never* precede analysis.

Arrangement of Work.—All work must be *accurately* and *neatly* placed on board, slates or paper, each necessary step being indicated.

Model.—A house costing \$1,000 was sold for \$1,250. What % was gained?

$\$1,250 - \$1,000 = \$250$, amount gained.

$\$250 \div \$1,000 = .25 = 25\%$, rate per cent gained.

Applications of principles of percentage to profit and loss, and commission.

Winter Term.

Commission, taxes, stocks, insurance, simple interest, notes, true and bank discount.

Business Forms.—Make the writing of business forms a very prominent part of this work. Bills of account, receipts, bank drafts, bank checks, certificates of deposit, promissory notes, etc. Also teach, in this connection, the elementary principles of book-keeping.

Enlarge upon business forms such as given in the fifth grade. Drill pupils on different forms of notes, receipts, etc., always giving correct forms to model after. The following will suggest what these should be:

NOTE.

\$1,500.

DETROIT, Jan. 5, 1890.

Ninety days after date I promise to pay to Alexander Meachener, or bearer, fifteen hundred dollars, with interest at eight per cent, value received.

NATHAN HORTON.

RECEIPT.

\$25.

JACKSON, MICH., Jan. 20, 1890.

Received of James Herkiner twenty-five dollars on house rent for the month of December, 1889.

CHARLES JOHNSON.

BANK CHECK.

GRAND RAPIDS, MICH., Jan. 5, 1890.

First National Bank.

Pay to Montgomery Andrews, or bearer, five hundred and 75-100 dollars.,
\$500.75.

JAMES RICHARDSON.

Spring Term.

Exchange, partial payments, and a review of previous term's work.

GEOGRAPHY.

Second Book.—During the first month carefully review map of Michigan, requiring each pupil in the class to draw an excellent map of the same on strong paper not less than ten by twelve inches. Preserve the

best two maps for the County Secretary. Give the climate and compare it with the climate in the same latitude on the eastern and western coasts of the United States, and with the climate in Europe and Asia. Give the number of square miles of territory and the population. For what is Michigan noted? Give and locate its productions. Locate and explain its prime meridian and base line, and explain how townships are numbered. Give latitude and longitude of place where you live. Explain the land survey, the division of townships into sections, giving the number of each section, the division of sections into quarter sections, etc. Locate the railroad and business centers and tell what is manufactured at each point. Trace some of the most important railroads. Give the number of counties and name the southern four tiers. Locate and describe the great lakes and the navigable rivers in and about Michigan. Give route for a shipload of corn from Chicago to Liverpool.

Second Month.—EDUCATION IN MICHIGAN.—Locate and describe the educational institutions of this State. Who was the founder of its school system?

History.—Our geographical knowledge would hardly be complete without some knowledge of the history of Michigan. Assist the pupils in acquiring some information from the primer histories. Give date of discovery and settlement, of French period, of English period, of Michigan as a territory, of Michigan as a State. Tell something of Michigan in the wars. Name some of Michigan's great men.

Government.—Devote the rest of the month to the study of the government of Michigan. The teacher's desk should be supplied with some textbook on the subject as the information found in the geography is necessarily very brief. Study separately the executive, legislative, judicial and educational departments. Describe the government of a county, of a township, of a school district.

Third Month.—Map of North America and map of the United States. Before taking up the map questions, carefully discuss the surface, the relief systems, the river systems, the climate, people, animals and vegetation.

Fourth Month.—Map of the United States continued. Give more time for the study of the productions and commerce, both inter-state and foreign, for the location of principal railroads and manufacturing cities, than for the study of regular map questions. Locate places that are of historical interest, as well as capitals and the larger cities. Locate the principal water-ways through, around and out from the United States. Each pupil should construct an excellent map. A wall map will help the pupils to fix in mind many of the map questions and answers. If you have no map, the teacher and pupils can construct one on a large scale, on strong paper, and place it on the wall before the class for class use.

Fifth Month.—Map of the United States continued.

Sixth Month.—Map of South America, Mexico and Central America. Follow the same plan as for the study of North America and the United States.

Seventh Month.—Map of Europe.

Eighth Month.—Map of Europe continued, general review, and examination.

Discuss surface, soil, climate, and compare climate of north and south Europe, people, productions, animals, plants. Compare area and population. Trace its coast line and water-ways. Describe its governments, commerce; especially the government and commerce of Great Britain and Ireland. Name some of the important rulers and powers. Locate some of the places of historical interest when you take up the map questions. The teacher will be aided by a book of travels in Europe and some work on the rulers of Europe.

HISTORY.

United States History should not be pursued merely as a reading lesson, but taught regularly and systematically, with the object in view of giving pupils, before leaving school, a good, clear knowledge of the history of our own country. The topic method should be largely used, and the most important facts of history firmly fixed in mind by repeated reviews. To make the subject interesting much information not found in the text-books should be brought into the class, not to be learned, but to impress upon the memory what has been learned already. Pupils should never be allowed to use the words of the book in reciting. They should be taught to study a paragraph, or paragraphs, bearing upon a particular topic so as to be able to give the substance of what has been read in their own words. So, when a period or epoch has once been gone over in class, the pupil, by means of a brief diagram or outline, should be able to give all points of interest and importance, omitting what there is no profit in attempting to remember. The frequent use of diagrams can be made of great benefit in the work.

First Three Months of the Winter Term.—Periods of discoveries, explorations and settlements, inter-colonial wars, and the war of the Revolution.

Fourth Month.—The constitution of the United States and the constitution of Michigan carefully read and compared.

PHYSIOLOGY AND HYGIENE.

See fifth grade.

EIGHTH GRADE—EIGHTH YEAR.

TEXT-BOOKS.—Fifth reader, grammar, advanced arithmetic, copy-book, geography, history, civil government, and spelling-book.

APPARATUS.—Slate, pencil, sponge, pen, ink, and practice paper.

WHAT TO TEACH.

Reading.—Fifth reader.

Spelling.—Spelling-book.

Penmanship.—Copy-book.
Grammar.—Text-book completed.
Arithmetic.—Second book completed.
Geography.—Completed.
History and Civil Government.
Physiology and Hygiene.

READING.

See fifth and seventh grades for methods.

SPELLING.

See fifth grade.

During the eighth year the spelling should be mostly written. Oral spelling should be only for variety or change.

PENMANSHIP.

See previous grade.

GRAMMAR.

Complete the higher text-book.

ARITHMETIC.

Fall Term.—Review percentage, including interest, profit and loss, discounts. Ratio and proportion.

Winter Term.—Mensuration, measurements of plane surfaces,—squares, triangles, rectangles, etc. Practical problems to apply. Cube and square root, and their applications to solids. Also study thoroughly the application of these as used by mechanics.

Spring Term.—Complete arithmetic finished and reviewed.

GEOGRAPHY.

First Month.—Map of Asia and Australia.

Second Month.—Maps of Oceanica and Africa.

Third Month.—Physical Geography and review.

Much knowledge in physical geography is already acquired. Thoroughly review and master the subject as outlined in the common school geography.

HISTORY.

At the beginning of the winter term we should again take up United States History at the constitutional period, and complete the study by the end of the term. A greater interest will be given to the study if at appointed times the class look up special subjects, as follows:

Accessions of Territory, { By purchase.
 { By conquest.

The doctrine of State Rights.

<i>Slavery</i> -----	{	When introduced.
		Provisions in the constitution.
		Missouri compromise.
		Fugitive slave law.
		Kansas-Nebraska bill.
		Decision of Supreme Court.
		Emancipation proclamation.
		Amendments to the constitution.

<i>American Literature</i> -----	{ In colonial times. In revolutionary times. In constitutional period.
<i>Treaties</i> -----	{ Names. When secured. Privileges or rights granted.
<i>Tariff</i> -----	{ Duties. Internal revenue. Protective tariff.
<i>Inventions</i> -----	{ Cotton gin. Steamboat. Railroad. Telegraph. Sub-marine telegraph. Telephone. Electric light. Electric motor.
<i>Prominent men</i> -----	{ Of colonial times. Of revolutionary times. Of constitutional period.

REMARKS:—Combine seventh and eighth grade history classes.

CIVIL GOVERNMENT.

Spring Term.—Thoroughly and systematically review all knowledge of civil government already acquired, and complete the subject by the end of the spring term. Study the government of the school district, township, county, State, and the United States, in their order; the legislative, executive, and judicial departments of each; the term of office, qualifications duties, and salary of each officer.

<i>Carefully Explain</i> -----	{ Naturalization. Right of eminent domain. Ex-post facto law. Writ of habeas corpus. Bill of attainder. Impeachment.
<i>Drill on dates of</i> -----	{ Annual school meeting. Township election. County election. General election. Meeting of Board of Supervisors Meeting of State Legislature. Meeting of Congress. Electoral College.

PHYSIOLOGY AND HYGIENE.

See fifth grade.

TABULAR VIEW OF THE COURSE OF STUDY.

[illegible]

The numbers in the columns indicate the pages of the book to which classes go each term. The pages, as here represented, cannot be used, because—to avoid advertising any particular publishing house—no special books are mentioned. Each secretary should name, under the heading "Text-books," the books in use in his county, and the figures in the columns should correspond to them. When a page has been arranged and printed, it may be pasted over this.

DAILY PROGRAMME.

FORENOON.			AFTERNOON.		
Time.		Length.	Time.		Length.
Begin.			Begin.		
9:00.....	5.....	Opening.....	1:00.....	10.....	First Reader.....
9:05.....	10.....	First Reader.....	1:10.....	20.....	Physiology (Text-book).....
9:15.....	15.....	Second Reader.....	1:30.....	10.....	Second Reader.....
9:30.....	15.....	Arithmetic.....	1:40.....	20.....	Grammar or Language.....
9:45.....	25.....	Arithmetic.....	2:00.....	15.....	Geography.....
10:10.....	20.....	Arithmetic.....	2:15.....	15.....	Writing.....
10:30.....	15.....	Recess.....	2:30.....	15.....	Recess.....
10:45.....	10.....	Numbers—Primary.....	2:45.....	15.....	Fourth Reader.....
10:55.....	15.....	Third Reader.....	3:00.....	10.....	Spelling.....
11:10.....	20.....	Geography.....	3:10.....	15.....	Spelling.....
11:30.....	20.....	{ U. S. History or Geography. }	3:25.....	10.....	Language (oral).....
11:50.....	10.....	{ Civil Government. }	3:40.....	20.....	Miscellaneous.....
		Oral Physiology and Hygiene.....			

NOTES—1. This program is intended to be, and must necessarily be, more or less flexible. It should be a guide, in general, as to the number of classes and time given to each.

2. The amount of time given to classes should vary according to the importance of a study, and the number of pupils in the class.

3. The programme may vary a little each term, depending on advancement of pupils, etc.

4. Classes should be so arranged that the same pupils will not have two consecutive recitations.

5. Secretaries will find it impossible to have a full set of classes for each separate grade. Indeed, it will seldom, if ever, happen that all the eight grades are full.

HELPS FOR TEACHING THE VARIOUS BRANCHES.

Below is given a partial list of books that will be found suggestive and helpful to teachers. In order to keep pupils interested and busy, the teacher must know how to present subjects and have some source from which to draw material and inspiration. A few well chosen books, that cost but a trifle, will save any teacher hours of worry and trouble over restlessness and poor government, caused by mere idleness.

FOR NUMBERS AND ARITHMETIC.

First Steps in Number.—Wentworth & Reed. Ginn & Co.
Natural Method of Teaching Number. Triplet, 30c. A Flanagan.
Arithmetical Problems.—Wentworth, 30c. Harper & Bros.
Complete Arithmetic.—Howard. Potter, Ainsworth & Co.
The two last furnish problems, a choice variety, for supplementary work.

FOR LANGUAGE.

Metcalf's Language Lessons.
Language Below the High School. (Second, Third, Fourth School Year, separate; 12c. each.)—De Garmo. Pub. School Pub. Co., Chicago.
How to Speak and Write Correctly. (Teacher's Ed.) Knox-Heath.
Bright's Graded Lessons in English.
Swinton's Language Lessons. Harper & Bros.

For material for this work the following are excellent.

Primer of Scientific Knowledge.—Paul Bert. Lippincott & Co.
First Steps in Scientific Knowledge.—Paul Bert. Lippincott & Co.

These will also be found exceedingly valuable for miscellaneous exercises.

FOR GEOGRAPHY.

The Child of Nature.—A. E. Frye. Bay State Pub. Co.
Methods and Aids in Geography.—C. F. King. Lee & Shepard.
Our World, No. 1.—Mary L. Hall. Ginn & Co.
Geography for Young Folks. Rowe Pub. Co., 30c.
How to Study Geography.—Parker. Appleton & Co.

FOR HISTORY.

American History Stories. Rowe Pub. Co., 36c.
Young Folks' Heroes of History. Lee & Shepard, 60c.

Directions for teaching primary reading will be found in *White's Elements of Pedagogy*, given in the list following. The following is also recommended:

Primary Reading: How to teach it. Published by the Rowe Pub. Co., Ira, Ohio; price 15c.

BOOKS ON THE THEORY AND ART OF TEACHING.

- Elements of Pedagogy.—White. Van Antwerp, Bragg & Co.
 Methods of Teaching.—Swett. Harper & Bros.
 Theory and Practice of Teaching.—A. S. Barnes & Co.
 Lectures on Pedagogy.—Compayré. Ginn & Co.
 Education.—Spencer. Appleton & Co.
 How to Grade and Classify a Country School.—Welch. Donohue & Henneberry, Chicago.
 Putnam's Psychology.

LIST OF BOOKS SUITABLE FOR SCHOOL LIBRARIES AND SUPPLEMENTARY READING.

FOR PUPILS BELOW THE FIFTH GRADE

Title.	Author.	Title.	Author.
Water Babies.....	Kingsley.	Tales Out of School.....	Stockton
Books of Fables.....	Scudder.	Little Folks in Feathers and Furs.....	Miller.
Sharp Eyes.....	John Burrows.	Boys of Other Countries.....	Taylor.
Birds and Bees.....	Mary E. Burt.	Stories in American History.....	Dodge.
Little Daffydowndilly.....	Hawthorne.	The Rollo Books.....	Abbott.
Familiar Friends.....	Olive Patch.	Tanglewood Tales.....	Hawthorne.
Field Friends and Forest Foes.....	Browne.	The World by the Fireside.....	Kirby.
Paws and Claws. True Stories of		Madam How and Lady Why.....	Kingsley.
Animals.....	Cassell.	Silver Wings and Golden Scales.....	Cassell.

FOR PUPILS BELOW THE SEVENTH GRADE.

Foot Prints of Travel.....	Ballou.	Little Women.....	Alcott.
Boy Travelers in Japan.....	Knox.	Swiss Family Robinson.....	
Boy Travelers in Ceylon.....	Knox.	Young Folk's History of United	
Boy Travelers in India.....	Knox.	States.....	Higginson.
Boy Travelers in Egypt and the Holy		Pilgrims' Progress.....	Bunyan.
Land.....	Knox.	True Stories from History and	
Our Young Folks Abroad.....	McCabe.	Biography.....	Hawthorne.
Ralph's Year in Russia.....	Richardson.	Boys of '76.....	Coffin.
Zig-Zag Journeys in Classic Lands,		Young Folk's Book of America, Higginson.	
[Butterworth.		Children of Westminster Abbey, Kingsley.	
Child's History of England.....	Dickens.	Great Cities of the Ancient World,	[Shepard.
Twice Told Tales.....	Hawthorne.		
Tollers of the Sea.....	Hugo.		

FOR HIGHER GRADE.

Title.	Author.	Title.	Author.
Old Time Colonies,	Coffin.	About Old Story Tellers, . .	Mitchell.
The Drum Beat of The Nation, .	Coffin.	A book of Worthies,	Yonge.
Marching to Victory,	Coffin.	Joyous, Pleasant and Refreshing	
One Hundred Famous Americans,		History of the Perfect Knight	
[Routledge.		Bayard,	Kindersley.
Building the Nation,	Coffin.	Brave Lives and Noble, . . .	Mateaux.
Into Unknown Seas,	Kerr.	Hereward (Time of William the	
Strange Stories of History, . .	Eggleston.	Conqueror), [Kingsley.	
Cruise of the Canoe Club, . .	W. L. Alden.	Westward Ho (Elizabethan Age),	[Kingsley.
Tales from Shakespeare, . . .	Lamb.		
Life of Longfellow,	Hendricks.	Harold (Wm. the Conq.), . . .	Bulwer.
Life of Lincoln,	Leland.	Last of the Barons. (Wars of the	
Stories of the Old Dominion, . .	Cooke.	Roses),	Bulwer.
Story of Nations—Greece, Rome, Normans,		A Great Treason (American Rev.),	
Germany, Ancient Egypt, Carthage,		[Hoppus.	
Ireland.		Joan the Maid, etc.,	Charles.
Stories of Chinese Gordon, . . .	Hake.	Draytons & Davenants, . . .	Charles.
Light of Two Centuries, A. S. Barnes & Co.		Grandmother's Stories and other	
Columbus,	Alden.	Poems,	Holmes.
Washington,	Habberton.	Evangeline,	Longfellow.
Plutarch for Boys and Girls, . .	White.	Snow-Bound,	Whittier.

SUPREME COURT DECISIONS.

I.

ELECTION OF SCHOOL EXAMINER.

The People, ex rel. Luther F. Conrad v. Jerome B. Stone, Champlin J.

By section 1, chapter 12, act No. 266, laws of 1887, the chairmen of the boards of school inspectors of the several townships in each county are required to meet at the office of the county clerk of their county on the first Tuesday in August in each year, and elect by ballot one school examiner, who shall hold his office for two years, or until his successor shall have been duly elected and qualified.

Section 12 of the same chapter provides: "Whenever by death, resignation, removal, or otherwise a vacancy shall occur in the board of school examiners of any county, other than in the office of secretary, the judge of probate of such county shall have power to fill such vacancy until the first Tuesday in August after his appointment, at which time an examiner shall be elected to fill the unexpired term by the chairmen of the boards of the school inspectors of the several townships in the county."

Under the statute in force previous to 1887, there was one school examiner elected on the first Tuesday of August, to hold his term for three years, or until his successor was duly elected and qualified; and, in case of vacancy in the board of school examiners, the judge of probate was authorized to fill such vacancy for the unexpired portion of the term.

In 1887 there were three examiners,—one whose term of office would expire on the first Tuesday of August, 1887; one on the first Tuesday of August, 1888; and one on the first Tuesday of August, 1889. The act of 1887 declared that no election for school examiner should be had in 1887, but the two examiners previously elected, whose terms of office shall not have expired, should hold for the unexpired portions of the terms for which they were elected.

It appears that one S. W. Baker was one of the school examiners elected in 1885, and whose term of office would expire on the first Tuesday of August, 1888, and that he resigned his office, and Luther F. Conrad was appointed by the judge of probate to serve as school examiner for the unexpired portion of such term. It further appears that the chairmen of the several boards of school inspectors of the respective townships in Clinton county, convened at the office of the county clerk of that county, on the first Tuesday of August, 1888, and were called to order by the clerk, and 16 members were present, and answered to their names, and, on motion, N. U. Webb was chosen chairman of the meeting; that a motion was made, and the board proceeded to an informal ballot to elect a school examiner. Tellers were appointed, and the ballot resulted as follows: J. B. Stone received eight votes; L. F. Conrad received 7 votes; E. M. Plunkett received one vote. Five more informal ballots were taken, with the same result. The record of the board proceeds to state:

"On motion of Mr. Hoffman, the board adjourned. The meeting was again called to order by the clerk, and the following members answered to their names."

The names are given, fourteen in all. The record, as made by the clerk, then proceeds:

"On motion of Mr. Winston, N. U. Webb was chosen as chairman of the meeting. On motion of Mr. Taylor, the chair appointed as tellers, Messrs. Taylor and Hoffman. On motion of Mr. Taylor, the board proceeded by ballot to elect a school examiner. The whole number of votes cast was fourteen (14), J. B. Stone received eight (8); L. F. Conrad received five (5); E. M. Plunkett received one (1), total, 14. Mr. Stone, having received a majority of all the votes cast, was declared duly elected. On motion of Mr. Taylor the board adjourned."

Mr. Stone was verbally notified of his election, took the oath of office, and entered upon the duties of school examiner.

L. F. Conrad, conceiving that the election was illegal, and that in fact no election had been had, claimed that no successor had been elected, and that he, by virtue of his appointment, in 1885, was entitled to hold the office until his successor had been duly elected and qualified, namely, until the first Tuesday of August, 1890, and caused an information in the nature of a *quo warranto* to be filed in the circuit court for the county of Clinton against said Jerome B. Stone, alleging that Stone intruded into and usurped the office of school examiner, and that he (said Conrad) was lawfully entitled to the possession of the office. Plea was filed setting up that the respondent, Jerome B. Stone, was duly elected by the board of school examiners (inspectors ?) on August 7, 1888, and that he had duly qualified as such. Replication that he was not legally elected, and that no legal election was held. On the trial before the circuit judge without a jury, in addition to the above facts, it was shown that two of the members of the board, after the first adjournment left for home, and were not notified of the calling together of any other meeting that same day, or any other time, and knew nothing about it until after the meeting.

The circuit judge found that the said Jerome B. Stone did unlawfully usurp, intrude, into, and unlawfully held, the office of school examiner, and gave judgment of ouster, and further adjudged that the relator, Luther F. Conrad, was still the legally and lawfully elected and appointed school examiner, and entitled to hold said office until his successor should be elected and qualified.

In reviewing these proceedings, it is proper to remark, in the first place, that the statute requiring the board of school inspectors to elect school examiners by ballot does not require that a majority of the whole board, nor that a majority of the votes cast, shall be necessary to elect. It is only in cases when the statute so provides that a majority of all the votes cast is necessary for the choice of an officer. McCrary, Elec. § 197; Cush., Leg. Ass., § 118; Paine, Elec. § 571; Cooley, Const. Lim., 619. Mr. Cushing says:

"In elections in which the principle of plurality is adopted, the candidate who has the highest number of votes is elected, although he may have received but a small part of the whole."

In general elections in this State we have adopted, and constantly act upon, the principle that plurality elects (How. Stat. § 143); and whenever, as in some cases, in the board of supervisors and in some municipal charters, a majority of the body voting is required, it is especially stated in the law.

It follows that Jerome B. Stone was elected upon the first ballot taken, when the whole of the members of the board were present. The law has provided for an election in the case of a tie. Section 1 of chapter 12 enacts that: "The county clerk shall be the clerk of such elections in all cases, and, in case of a tie, shall give the casting vote."

In this case the ballots were cast in such a manner as to prevent a tie, but not to prevent an election.

Counsel for relator claims that there was no significance in, and there could be no objection upon, an "informal ballot." We cannot accede to such claim. When the law requires certain officers to be elected by ballot, there is, and can be no such thing as an "informal ballot." All ballots cast under statutory requirements are formal and final, if there is an election, and cannot be repeated. "Informal ballots" are sometimes taken in a caucus or in a nominating convention; but they have no place in an election required by law for the election of officers. Neither was it necessary that Mr. Stone should have been declared elected. The result of the ballot expressed that fact, and it was the duty of the clerk to notify him of his election.

But, had there been no election, the relator was not entitled to the office. It is only elected officers who hold until their successors are elected and qualified. Mr. Conrad was appointed to fill a vacancy and he could only serve out the unexpired term. Had there been no election by the board, as claimed by relator, there would have been a vacancy in the office which the judge of probate could have filled by appointment until the first Tuesday of August after the appointment.

The judgment of the circuit court must be reversed, with cost of both courts against relator, and the incumbent, Jerome B. Stone, is confirmed in his office of school examiner.

Sherwood, C. J., Morse and Campbell, J. J., concurred. Long, J., did not sit. Decided December 28, 1889.

II.

REFUSAL OF ASSESSOR TO PAY ORDER.

*Phillips v. School District No. 3.*LONG, *Justice.*

This action was commenced in justices' court upon the following order:

\$16.00.

New Buffalo, March 16, 1888.

School district order—Treasurer of school district No. 3:—Pay to Abram Duell or bearer sixteen dollars, and charge to account of fund for incidentals.

THOMAS HUTTON, *Director.*ABRAM DUELL, *Moderator.*

Defendant had judgment, and plaintiff appealed to the circuit court for Berrien county, where the cause was tried before a jury, who under the direction of the court, rendered a verdict in favor of the defendant. On the trial it appeared that the order was verbally transferred to the plaintiff by Mr. Duell, so he might bring the suit, there being an arrangement between them that they should share equally in the proceeds of the judgment. The circumstances under which the order was drawn are that in the fall of 1887, Thomas Hutton, director, and Abram Duell, moderator, of school district No. 3, engaged Della Warren to teach the school of that district for eight months at \$30.00 a month; at the time of making the contract her certificate had nearly expired, and, anticipating that she would receive a new certificate as a qualified teacher, the contract was made in two writings,—one for two months, and one for six months thereafter. These contracts were not signed by the assessor. No meeting of the district board was called, and the assessor had no notice at that time of the making of the contracts. At the end of the two months the director drew an order on the assessor in her favor, for \$30.00 per month, which was countersigned by Duell as moderator. This order the assessor refused to pay, and he also refused to recognize the validity of the contract at \$30.00 per month. It was finally agreed between the district officers that the contracts should stand for \$28.00 per month, and the six months' contract was then reformed to read as for eight instead of six months, and at \$28.00 per month. Mr. Duell agreeing to pay the additional \$2.00 per month for the eight months. This arrangement was continued, but whether with the assent of the teacher is not made apparent by the record. The district paid the \$28.00 per month for the full time, and Mr. Duell paid the \$2.00 per month. At the annual school meeting held September 5, 1887, a motion was made and carried "that the district refund the sum of sixteen dollars to Abram Duell for money paid Della C. Warren, former teacher, out of his own pocket." At a meeting of the district board held in August, 1888, the present order was drawn, which the assessor refused to recognize or pay, for the reason that there was not money enough in the treasury, and also that it was not a legal charge. From the view we take of the case, it is not necessary to discuss the question of the validity of the action of the school district meeting in voting the money to Mr. Duell in the present controversy.

It is evident the school district favored the payment of the money which Mr. Duell had paid to the teacher from his own pocket, and directed its repayment. The fault if any exists, rests entirely with the assessor. The order was drawn by the director, countersigned by the moderator, and duly presented for payment to the assessor, who refused payment; his principal ground, apparently being that the action was illegal. The remedy of the party in whose interest the order was drawn if any exists, is by *mandamus* against the assessor to compel payment. There is no reason why the school district should be put to the cost of a suit by reason of the refusal of the assessor to discharge a duty which might be compelled by proper proceedings against him. For these reasons the judgment of the court below must be affirmed, with costs. The other justices concurred.

January 17, 1890.

III.

SCHOOL TAXES PAID UNDER PROTEST.

*Lake Superior Ship Canal Railway and Iron Co., vs. School District No. 1, et. al.*GRANT, *Justice.*

The complainant is the owner of several thousand acres of land situated in the township of Hancock, Houghton county, Michigan. He paid all the taxes assessed against

these lands for the year 1888, excepting the school taxes in excess of the one-mill tax, which amounted to \$1,676.45. On the 18th day of July, A. D. 1889, complainant filed its bill of complaint against the defendants, setting forth the illegality of the taxes, and praying that they may be decreed to be unauthorized, illegal, and void, and also praying for a perpetual injunction restraining defendants from advertising and selling said land for said taxes. The defendants demur upon the following grounds:

First, That under section 104, of act 195 of the public acts of this State for the year A. D. 1889, and under section 107, of act 153, of the public acts of this State for the year 1885, no injunction can or shall issue to stay proceedings for the assessment or collection of taxes under either of said acts;

Second, That the remedy of said complainant under and by virtue of act No. 195, of the public acts of 1889, is ample and sufficient to protect it in its alleged rights, and that said act provides a remedy, and a procedure by which the legality or validity of the assessment and taxes mentioned in said bill can be adjudicated;

Third, That there can be no sale of the lands or of any part of them, mentioned in said bill, for the non-payment of taxes therein mentioned, until after a hearing in open court, on due and legal notice to said complainant at which time said complainant will be given an opportunity to contest the validity of any taxes in said bill alleged.

This court has already decided that the legislature may take away from the circuit courts the power to issue writs of injunction, where it has provided that the tax may be paid under protest and suits brought to recover it. Such a provision is not unconstitutional. *Eddy v. township*, 72 Mich., — 40, N. W. Rep. 792. That decision covers this case, so far as the application for an injunction is concerned.

The only other question is, can complainant maintain this suit to remove the cloud from its title caused by the illegal assessment and levy of such school taxes? Defendants contend that this right has been taken away by the tax law of 1889, act No. 195. This act provides (section 52) that the Auditor General shall file a petition in the circuit court in chancery of the county where the land is situated, giving descriptions of lands, etc., praying for decree that the taxes be paid, or, in default thereof, that the lands be sold. The Auditor General is required to file the petition as soon as practicable after the first day of July, against all the lands in the county upon which taxes shall have remained unpaid for more than one year from the 1st day of July next after the return to the Auditor General as delinquent. Subpoenas are thereupon to issue, and to be served upon the owners if to be found within the State. The law then provides for a sale of the lands for unpaid taxes on the first Monday of May next after the filing of the petition. It is unnecessary to notice the other provisions of the law for the purposes of this case. The act of 1889 does not in express terms repeal section 6626, Vol. 2 How. St., nor refer to it in any manner whatever. But the contention is that this provision of Howell's Statutes is repealed by implication, as far as the tax law is concerned, because it provides that the land-owner may have his day in court to contest the validity of the taxes assessed upon his lands. Repeals by implication are not favored, and will not be established, except in cases where it appears that such was the clear intention of the legislature. *Gorden vs. People*, 44 Mich., 485, 7 N. W. Rep. 69. The jurisdiction to institute suits in chancery for the removal of clouds from title was given to holders of the legal title by the code of 1833. It was enlarged by the act of 1840, so as to give the right to owners of equitable titles. In the absence of an express provision we cannot hold that it was the intention of the legislature to take away this important remedy, and compel land owners to wait two or more years from the time that taxes become a lien upon their lands before they can have the opportunity to contest their legality.

We think that the Auditor General and county treasurer are proper parties to the suit. The former initiates the proceedings for the sale of the lands, and the treasurer makes the sale. The decree to be finally rendered in the case will affect their action in the premises, and determine whether or not they shall proceed under the tax-law to a sale. The decree of the court below sustaining the demurrer must be overruled, and the defendants given the usual time to plead. Champlin, C. J., and Morse and Campbell, J. J., concurred.

January 31, 1890.

IV.

TAXATION FOR SCHOOLS.

*Wilcox et. al. v. Township of Eagle.**LONG Justice.*

This cause was commenced in the circuit court for Clinton county, and tried before the court without a jury, who gave judgment for plaintiffs for \$18.48. The court made a finding of facts and law. No exceptions were taken to the findings. Plaintiffs bring error. Under circuit court rule 90, the findings are to be treated as a special verdict; but no exceptions being taken to the findings, the only question that can be considered in this court is whether the findings support the judgment. To raise this question no exceptions are necessary. *Trudo v. Anderson*, 10 Mich., 357; *Railroad Co., v. Byerly*, 13 Mich., 442. The findings of facts are substantially as follows: (1.) Plaintiffs bring suit to recover back certain school taxes assessed upon land owned by him in 1888, said land being in fractional district No. 11, of Eagle and Oneida townships, which was a graded school district since January 1, 1877; the land on which the tax was levied being all in the township of Eagle. (2.) Plaintiffs bought the land of one Hayes, and received a warranty deed therefor on February 10, 1888; the deed containing the usual covenants of warranty. (3.) There was voted by the school board of said district, on September 7, 1887, the sum of \$2,756.76 over and above primary school interest fund and mill tax, to meet the expenses of the school district for the ensuing year. A certificate showing the different items making up this amount was made and signed by all the members of the board, October 1, 1877, but was not served on the clerk of the township of Eagle until some time in December, 1877. The proceedings of the board show that only \$200, was voted for incidental expenses for 1877. The certificate made and dated October 1, 1877, shows the amount for incidental expenses to be \$219.74. (4.) None of the amounts included in this certificate were, however, assessed against the property in said district lying in the township of Eagle in the year 1877. (5.) In 1888 the school district board voted the necessary amounts for school purposes, and included therein the amount which was not assessed against the property in Eagle, in 1877. It was stated in the certificate: "Tax for 1887, uncollected in Eagle, to be assessed in Eagle, \$217.72;" and the certificate signed by all the district officers, was delivered to the township clerk of Eagle, September 1, 1888, directing him to report the same to the supervisor of Eagle. (6.) Of the \$217.72, assessed in 1888, as a part of the tax for 1887, the plaintiffs paid \$183.22, and of the taxes of 1888, they paid \$227.94, making a total of \$411.16. This amount the plaintiffs paid under a written protest, and this action is brought to recover that sum. (7.) At the annual meeting of the district, held September 3, 1888, the district, on the recommendation of the board, voted to raise \$4,200 for the current year, \$200 of which was for the purpose of building a front walk; but the record of the district meeting does not show what the other \$4,000 was voted for; and the members of the board, when they made their certificate to the township clerk, add, to the \$4,200, \$217.72 of the tax of 1887 that was not assessed in Eagle in 1887, making a total of \$4,417.72. (8.) It was agreed by the counsel for the respective parties on the trial of the case that plaintiffs paid, in 1889, of the excess of \$19.74 reported by the board for incidental expenses, the sum of \$18.00. (9.) The amount certified by the district board in 1888, to the clerk of Eagle township, was duly assessed and levied upon the property in said district in the township of Eagle. (10.) Of the tax certified to the clerk of Eagle in 1887, and assessed over to that portion of the school district lying in Eagle, in 1888, \$7.12 would have been assessed against the personal property of E. M. Hayes had it been assessed in 1887.

From the foregoing facts, I conclude that the illegality or omission shown in this case affects the amount of the tax only; that the \$19.74 excess reported by the board was unauthorized and illegal, and it being agreed that the plaintiffs paid of this amount \$18.00, they should recover that amount with interest at six per cent, from February 11, 1889, which amounts to \$18.48. For this amount judgment was entered.

It is contended by counsel for plaintiffs that they should have judgment under this finding of facts, for the full amount of taxes paid by them for school purposes: (1.) "Because there is no law to warrant the spreading of the tax of 1887 in the year 1888." (2.) "If it is found that the law directs such action, it is in conflict with that provision of the constitution which declares that the legislature shall provide an uniform rule of taxation."

It is provided by section 5090 of Howell's Statutes that "if any taxes provided for by law for school purposes shall fail to be assessed at the proper time, the same shall be assessed in the succeeding year." It is contended that this pro-

vision applies only where there is nothing left to be done except the assessing, and not to a tax where any of the steps leading up to the assessment have not been taken; that in this case there was not only a failure to assess the tax, but the school board failed to certify the amount to the clerk of Eagle in time, and the clerk failed to certify the same to the supervisor. We cannot accept this view. The statute was intended to meet just such cases. The tax was properly raised by the board, and failed of assessment for the reason that the board did not certify it to the clerk in time for the supervisor to spread it on his roll for that year. Under this statute, it was therefore properly assessed the next year. Under the second objection of the counsel, it may be said that the law authorizing such re-assessment is in the very line of a uniformity of taxation. It is not contended but that the proceedings of the school district board in voting this tax were regular, and the amount within the power of the board to raise for such purposes. It only failed because the board neglected to certify to the town clerk of Eagle in time to have it certified to the supervisor for that year's assessment. The land in that town was properly chargeable with its proportion of the taxes of that school district for the year 1887, and it only paid its proportion when it paid that amount as reassessed in 1888. This view is fully supported by *Brevort v. Detroit*, 24 Mich. 325; *Fairfield v. People*, 94 Ill. 255; *Tallman v. City of Janesville*, 17 Wis. 98; *Cross v. City of Milwaukee*, 19 Wis. 509.

It is said, however, that this rule operates oppressively upon the plaintiffs in this case, as they purchased the bonds in February, 1888, and at that time the tax of 1887 was not a lien on the land, and was a tax which should have been paid by the former owner, and of which the plaintiffs had no notice. It is true that rules of taxation may at times operate harshly, but we cannot declare them void if it is a proper exercise of taxing power. The land purchased by plaintiffs must be subjected to its share of the public burdens, and it was only so made subject to this burden by the re-assessment. *Tallman v. City of Janesville*, supra. The court found that this \$19.74 certified to the clerk in the year 1887 was not included in the amount voted to be raised that year, and that of this amount the plaintiffs paid \$18.00, which, with the interest thereon, the court awarded to the plaintiffs. The findings fully support the judgment, and it must be affirmed, with costs. The other justices concurred.

June 6, 1890.

V.

SCHOOL SUPERINTENDENT. ACTION FOR COMPENSATION.

Davis vs. School District No. 1 of the City and Township of Niles.

CAHILL, Justice:

The plaintiff sued the defendant, being a graded school district, to recover for services rendered during the months of April, May and June, 1887, as superintendent. The plaintiff had been employed at the beginning of the year as principal of the high school, at a salary of \$900 a year, and performed the duties of his position, and received his salary. One J. L. Lucas had been employed as superintendent of the schools, entered upon the discharge of his duties, and continued to perform them until the 20th of April, 1887, at which time he was attacked with hemorrhage of the lungs, and was obliged to give up his position as superintendent. The next day plaintiff met Mr. Gilbert, the director of the school district, and said to him: "Mr. Lucas has just told me that you had a meeting, and had decided to have me take care of his work in preference to getting a new man unfamiliar with the duties of the place." Mr. Gilbert replied: "Well, how much work is there to do?" The plaintiff answered: "There is a good deal of work there. There is all the superintending duties, requiring from six to ten hours a day extra. I am paid for working as principal, and don't think I ought to be expected to do superintendent's work without being paid for it. * * * I object seriously to undertaking the work." Finally the director said: "You go on, Davis, and do the work; you can do it better than any stranger, because you are already familiar with the building, the teachers, and pupils. You go on and do the work." I said: "I have told you I cannot undertake that work unless I know what will be the outcome. I don't propose to go into that work; I was not hired to do superintendent's work." He said: "You go on. There is only eight or ten weeks left this year. You go on, and we will see that it is all right." I said: "If you say you think it is all right, I will go on and do the work."

He said: "You go on and do the work the best you can." Plaintiff further testified: Question. You may state what service you performed outside of teaching? Answer. I performed the regular superintendent's duties—the duties that the superintendent would exercise in superintending and managing the school. I attended to the school supplies, the books in the library, chalk, pointers, map, globe, and so on. I also went down for supplies on several occasions; visited the ward schools when occasion demanded. There are five ward schools." Plaintiff also testified that he maintained proper order and discipline throughout the school buildings—all the school buildings, the central building and the branch buildings—administered punishment to refractory pupils, superintended the graduating exercises from beginning to end, trained candidates for essays and orations, and entered reports in the school records; that, after the school term closed, plaintiff spent about two weeks straightening up the books of the library, getting the records where they belonged; got everything in good condition for the next year, so that whoever his successor might be, he would find things in an orderly condition; that these services were no part of his duty as principal; that the first three or four weeks these extra services required six to eight hours a day, and that he was kept busy morning and night. Question. "What were those services worth during that time, outside of teaching?" Answer. "I should estimate them \$200 to \$250, outside of teaching." The plaintiff offered to show that the services rendered by him were performed not only at the request of the director, but with a knowledge, more or less, of the board of trustees. Defendant objected to the evidence thus offered, and the objection was sustained. It appeared upon the trial that the plaintiff had no certificate qualifying him as a teacher, and the circuit judge directed the jury to return a verdict for the defendant upon the ground that, as the plaintiff did not hold a certificate issued by an officer having power to issue such certificates, he could not recover for any services rendered by him for the district.

The opinion of the circuit judge was based upon paragraph four of section 5134 of Howell's Statutes, which provides as follows: "It shall be the duty of the board of trustees in any graded school district, * * * * *fourth*, to employ all qualified teachers necessary for the several schools, and to determine the amount of their compensation, and to require the director and moderator to make contracts with the same on behalf of the district, in accordance with the provisions of law concerning contracts with teachers." If the services rendered by the plaintiff, for which he sought to recover in this action, had been rendered as a teacher's, this provision of the statute would have applied. Teachers in graded schools are required to have certificates in the same manner as teachers of primary schools, but the services rendered by the plaintiff were, in part at least, outside of teaching. Paragraph 5 of section 5134 authorizes the board of trustees to employ such officers and servants as may be necessary for the management of the schools and the school property, prescribe their duties, and fix their compensation. Under this provision the person employed is not required to be a teacher, nor to have a certificate as a teacher. We think the plaintiff, if duly employed to render the services he claims to have rendered for the school district, was not disqualified from receiving compensation therefor by the fact that he had no certificate as a teacher. The doubtful question in the case is as to whether the plaintiff was legally employed to perform the duties for which he seeks compensation. It is clear that he was not, in the first instance, so employed, because such employment is required to be made by the board of trustees, and one of such trustees, acting as director, could not lawfully employ the plaintiff so as to bind the district. But, as this contract of employment was one which the board itself could lawfully make, the question arises as to whether, if the plaintiff actually performed the duties with the knowledge and consent of the board, and the district received the benefit of his services, the law will not imply a promise on the part of the district to pay what such services are reasonably worth. Cases are not wanting which hold that municipal corporations may become liable upon an implied *assumpsit*. When a municipal corporation receives money or property of a party under such circumstances that the law, independent of express contract, imposes the obligation upon the corporation to do justice with respect to the same, it has been held that it may be liable to an action. *Argenti v. San Francisco*, 16 Cal. 255. In the case just cited, Chief Justice Field says, that, in reference to services rendered, the case is different. Their acceptance must be evidenced by ordinances [or express corporate action] to that effect. * * * * If not originally authorized, no liability can attach upon any ground of implied contract. The acceptance upon which alone the obligation to pay could arise would be wanting." I do not see why any distinction should be made between services rendered and appropriated by municipal corporations, and any other property so received and appropriated, except that it might be more difficult, in the case of services rendered, to show an actual acceptance and intentional appropriation than in the case of tangible property. But,

if the proof showed that the services were actually accepted by the corporation with full knowledge of all the facts, I think the same rule ought to apply to services rendered that would apply to money or other property. It does not appear what the plaintiff could have shown as to the services having been performed with the full knowledge and assent of the board of trustees. The offer of proof by him on this subject was rejected, and we think erroneously. For this error, and also for the direction of the court, that the jury should return a verdict for the defendant, the judgment must be reversed, and a new trial granted. The other justices concurred.

June 6, 1890.

VI.

DIVISION OF DISTRICTS—ANNEXATION OF SCHOOL DISTRICTS—TAXATION.

School District No. 1, of Pine River, v. Union School District No. 1, of Pine River and Bethany et. al.

LONG Justice.

This controversy grows out of a claim made by the complainant that the defendant school district, without warrant of law, has since the year 1881, to and including the year 1886, extended assessment for taxes over certain territory which the complainant district now claims is a part of the territory lying and being within its boundaries, and that the taxes so levied were collected by the township treasurer for those years, and turned over to the school fund of the defendant district. This bill is filed for an accounting for moneys so assessed and collected amounting to over \$1,000, and for an injunction restraining the defendant district from assuming jurisdiction over that portion of the territory in controversy, and also restraining the defendant Robinson, who is supervisor of the township of Pine River, from assessing any tax upon the property in said territory for the use and benefit of the defendant district. The territory in dispute comprises one and three-quarters sections of land, and lies between the two districts, and from and including the year 1881, has been regarded as comprised within the territorial limits of the defendant district. The bill alleges that the complainant district was organized in 1854, composed of certain territory and of which the territory now in controversy formed a part, and that it has retained the whole of such territory ever since, and has been entitled to receive the taxes assessed on said lands to its own use. The defendant, by its answer, alleges that in April, 1881, by the action of the joint board of school inspectors of the township of Pine River and Bethany, this territory in the township of Pine River was detached from the complainant district, and added to that of defendant; that said action in detaching said territory from complainant district, and adding the same to defendant district, has since been duly recognized and acquiesced in by all parties interested; and that no protest or complaint was made until exhibited by the bill of complainant. On the hearing in the court below a decree was made perpetually enjoining and restraining the defendant district from receiving the sums of money arising from the taxes assessed on said territory, and also restraining and enjoining the defendant Robinson, as supervisor, from assessing and levying any taxes thereon for the use and benefit of the defendant school district. Decree for an accounting was denied. From this decree all parties appeal.

We need not discuss at length the testimony offered in the case, as it very satisfactorily appears that this decree cannot stand. The complainant, by its bill, attempts to explain the reason of the long delay in asserting its rights to the moneys arising from this territory as follows: "And your orator further shows that it has delayed action against the defendant school district, and the respective supervisors of the township of Pine River, from year to year, in the hope and belief that they would cease to cheat and defraud your orator out of its just rights in the premises, and legally perform their duty to your orator and the public as in justice and equity they ought to have done, and because your orator was poor and needed all the moneys it could raise for school purposes, and thus hesitated to expend the same in litigation." It is quite apparent, however, that the bill was filed because it was discovered that the records of the offices of the township clerks of Bethany and Pine River failed to show the joint action taken by

the boards of school inspectors of these two townships. The complainant, in making its case at the outset, introduced as witnesses these two township clerks. The clerk of the township of Bethany was first called, and complainant's counsel, at the outset of his direct examination, asked: "Have you in your possession the action of the joint boards of school inspectors of the townships of Bethany and Pine River since and including the year 1880?" Counsel also asked witness: "Have you any record in the book that you have in your hands of a joint meeting of the boards of school inspectors of the townships of Pine River and Bethany held on the the 23d day of April, 1881, in which the following territory of district No. 1 of Pine River was detached therefrom, and annexed to Union School District No. 1 of Pine River and Bethany, to-wit," (counsel here describing the territory in controversy). Other questions of similar import were asked by the counsel of this witness, and also of the clerk of the township of Pine River, and from such examination it appeared that the records did not show the action taken by this joint board detaching this territory from complainant's district. Counsel also called as witnesses an officer of the complainant district, and showed that during the year 1880 and thereafter, no notice was ever served upon him of the joint action of the boards of school inspectors for these two townships. It appeared, however, from complainant's proofs, that prior to 1887 the district had a log schoolhouse in the north-west corner of northeast quarter of section 27 of Pine River, which was within the territory in dispute, and that it was torn down in 1880 or 1881, and in 1882 or 1883 a new schoolhouse was built, one-half mile west and outside of disputed territory; and no claim was then made that the territory in dispute should be treated as belonging to that district, and no taxes were attempted to be laid on this territory to aid in building this schoolhouse. The defendants offered testimony tending to show that in the year 1881 there was a meeting of the school inspectors of these two townships, and action taken setting this territory into the defendant district, though no record of such proceedings are found or produced. It appears, however, that ever since that time the inhabitants of that territory, as well as the defendant district, has regarded that territory as within the jurisdiction of the defendant district, and the children of these inhabitants have attended school in the defendant district ever since. It appears, also, that on April 1, 1881, a petition was presented to the defendant district asking permission that this territory might be added to the defendant district, and the petition was granted. This was before the joint meeting of the joint board of school inspectors. Since that time it also appears that petitions have been made to defendant district, to have certain of this disputed territory set off from it, by the inhabitants residing within this territory. If the complainant never had notice of meeting and action of the joint board of inspectors, it is apparent that it has had notice of the claim made by the defendant over this territory during all these years.

Section 5033, Howell's statutes provides that the township board of school inspectors may regulate and alter the boundaries of school districts, and by section 5040 the action of the joint boards is required in case of fractional districts. The statute gives these boards power to do what the defendant claims was done in this case, and the two school districts have acquiesced for all these years in that action. The statute §5037, provides that every school district shall in all cases be presumed to have been legally organized where it shall have exercised the franchise and privileges of a district for the term of two years. Whatever action was taken by the school inspectors was not appealed from; and, after this long acquiescence by the complainant in the action of the inspectors in setting this territory off, it must be estopped from making this claim. The records are not produced, but it is quite apparent that some action was taken, and the matter treated as settled, in 1881. Parol evidence, under the circumstances, was admissible to show these facts: *Brooks v. Fairchild*, 36 Mich. 231; *People v. Maynard*, 15 Mich. 470; *Stuart v. School District*, 30 Mich. 70.

The cases cited by counsel for complainant are not applicable to this case. In those cases the actions were aimed directly at the regularity of organization of the districts. The present case is in equity for an accounting, and to restrain the defendant from exercising jurisdiction over a portion of territory that for a long term of years has been regarded within its exclusive jurisdiction, and in which the complainant, as well as others, have ever acquiesced. The decree of the court below must be set aside, and complainant's bill dismissed, with costs of both courts.

The other justices concurred.

June 6, 1890.

VII.

SCHOOL DISTRICTS—ALTERATION OF DISTRICTS.

*Donough et al. v. Dewey et al.***CHAMPLIN, Chief Justice.**

This is a common law *certiorari*. The plaintiffs, 10 in number, are taxpayers in school districts 1 and 7, in the township of Penn, in the county of Cass. The defendants constitute the board of school inspectors of the township. November 13, 1889, school district No. 4, was situated in the southeast portion of the township of Penn, and comprised five whole sections, four half sections, and one quarter section. School districts 1 and 7 are contiguous to district No. 4. In November, 1889, the board of school inspectors took steps to enlarge school district No. 4, by detaching territory from school districts Nos. 1 and 7. They gave notice of the time and place of meeting for the purpose of considering the propriety of altering, if deemed proper, the boundaries of district No. 4, and they gave in the notice the exterior boundaries of the district as they would be when altered, and also the boundaries of the district as it then existed, without mentioning in such notice school districts 1 and 7 by name. The notice was signed, "C. H. Kenworthy clerk of the board of school inspectors." The time for meeting was stated to be the 25th of November, 1889, at 10 o'clock A. M., and the place at the township clerk's office. The board met at the time and place stated. No question is made as to posting the notice in the districts interested. School district No. 4 of the township of Penn is a graded school district, and the trustees gave their consent in writing to the proposed change.

The board met pursuant to notice, and, after hearing arguments for and against the proposed change, and on motion of those opposed to the change, the further consideration of the matter was adjourned to December 7, 1889, at 10 o'clock A. M., at the same place, at which time the board again met and adjourned the place of meeting to the parlors of the Pemberton Hotel, being to a room adjoining the clerk's office. Two of the petitioners for the writ of *certiorari* appeared before the board and objected to their jurisdiction, and moved to quash all proceedings. Eight reasons were specified why the proceedings should be quashed, which were overruled, and are embraced, among others in the assignments of error in the petition for the writ of *certiorari*, and will be considered later. After hearing further arguments, the board voted to change the boundaries of school district No. 4 in accordance with the notice given. Afterwards, and within the 10 days required by law, the town clerk served upon the directors of school districts 1 and 7 and 4 a notice containing the boundaries of the school districts respectively as affected by the alterations made by the board of school inspectors. The petition sets up, and the return admits, that Elvene M. Hollister, one member of the board of school inspectors, is a female person. The plaintiffs in *certiorari* insist that their proceedings are illegal and wholly void for 17 reasons assigned in their petition, which may be summarized as follows: (1.) Elvene M. Hollister was not eligible to the office of school inspector and consequently the board of school inspectors was not legally constituted; (2.) The notice posted was not in compliance with law; and therefore the board acquired no jurisdiction; (3.) The board lost jurisdiction by adjourning; (4.) Irregularities committed by the board in their proceedings.

The reasons assigned relating to irregularities in the proceedings which do not affect property rights or jurisdiction may be dismissed, with the remark that they cannot be reviewed upon *certiorari*.

The law is silent as to the power of the board to adjourn. We think they have the right to adjourn, for any sufficient reason, both as to time and place; and unless it is made to appear that such an adjournment was an abuse of their corporate functions, and operated to the detriment of those affected, or to be affected, by the proceedings, such action is not subject to review.

The objections to the notice are: (1.) It is not signed by Charles H. Kenworthy as township clerk, but instead as the clerk of the board of school inspectors of Penn township; (2.) It did not state what lands would be detached from school district No. 7, nor from school district No. 1, and attached to school district No. 4. The boundaries of all school districts are of record in the township clerk's office, and also in the office of the director of each school district. Both the original and the boundaries of the school district No. 4, as proposed to be altered, were contained in the notice. This was sufficiently definite and certain, and showed that territory was to be detached from dis-

1. Howell's statutes Mich., §5040. 2. Constitution, article 11, §1.

3. Howell's statutes Mich., §782, renders females eligible as members of the board of school inspectors.

tricts 1 and 7, and attached to district 4. These notices were posted in districts 1 and 7. While it would have been proper to have named districts 1 and 7 in the notice, it was not essential, when the notice showed upon its face that they were to be affected by the proposed action. The law¹ states that the township clerk shall give at least 10 days' notice of the meeting. By the constitution², the township clerk is declared to be *ex officio* a school inspector, and the statute says that he shall, by virtue of his office, be the clerk of the board of school inspectors. In our opinion, the notice having been in fact signed by Charles H. Kenworthy, who was township clerk, is a valid notice, whether it described himself as township clerk or clerk of the board of school inspectors of Penn township.

The main objection to the legality of the proceedings of the board is based upon the ineligibility of Elvene M. Hollister to hold the office of school inspector.³ The board consists of three persons, and it appears that the action of the board complained of was unanimous. It would have been legal had Miss Hollister not voted nor acted. She assumed to be school inspector by virtue of an election to that office, and she acted as such, whether she was qualified to act or not, the proceedings have the sanction of a majority of the board, and were therefore legal. The constitutional question, therefore, does not necessarily arise. Mr. Justice Cooley, in his work on constitutional limitations, at page 196 (*163), expresses the sentiments of courts of last resort in this language: "Neither will a court, as a general rule, pass upon a constitutional question, and decide a statute to be invalid, unless a decision upon that very point becomes necessary to the determination of the cause."

Counsel makes the point that the law authorizing the election of two school inspectors is void, as being in conflict with article 11, §1, which provides: "There shall be elected annually, on the first Monday in April, in each organized township * * * one school inspector * * * whose powers and duties shall be prescribed by law." The same section makes the township clerk *ex officio* school inspector. It is a matter of serious doubt whether the legislature can create offices, which are special in the constitution, and limited by that instrument as to the number to be elected, without some authority, express or implied, contained in that instrument. But this question does not necessarily arise. There was in fact and law, one school inspector elected by the electors of the township of Penn, and he, with the town clerk, would constitute the board, if the additional school inspector was unauthorized. If the law did authorize two school inspectors, then Miss Hollister was elected to that office. The law authorizing her election had not been declared unconstitutional, nor the law for an additional school inspector. While it is true that there cannot be an officer *de facto* unless there be an office to fill, yet the rule is modified, so far as offices have been created, by the legislature, while the statute creating them has not been declared unconstitutional. This is upon grounds of public policy. *Mechem, Pub. Off.*, §§ 318, 327. She was therefore a *de facto* officer, having been elected under a statute which had not been declared unconstitutional, and her acts are valid whether she was eligible or not. The return made by the board of school inspectors to the writ of *certiorari* shows that their action was legal and proper. The right of any member of such board claiming to be lawfully elected, and in possession of the office cannot be tried upon *certiorari* in this collateral way. The proper method is by information in the nature of a *quo warranto*.

The proceeding of the board should be affirmed, with costs.

The other justices concurred.

October 10, 1890.

VIII.

POWERS OF BOARDS OF SCHOOL EXAMINERS.

Sturdevant vs. Board of School Examiners of Eaton County.

In denying the application for a writ of mandamus in this matter the court said substantially:

The relator asks for a writ of mandamus to compel the board of school examiners to issue to his daughter a certificate as a qualified teacher. She has had an examination and satisfied the board as to her learning; but the court refused her a certificate. The statute requires the board to grant certificates to teachers "who shall be found qualified in regard to good moral character, learning and ability to instruct and govern a

school." The petition and answer shows that difficulty of a personal nature exists between the lady and the board. They, the members of the board, have made return to us that they refused a certificate because in the exercise of their discretion they did not consider her a fit person to instruct and govern a school. While we are not prepared to say that the board has a right to arbitrarily refuse a certificate to one possessing the proper qualifications, we are prepared to say that if the board should refuse a certificate through a personal prejudice or a willful intent to injure an applicant and deprive him or her of earning a livelihood at teaching, such person would have the same remedy as any other person who is injured by the malfeasance of a public officer. The matter of selecting or certifying proper and competent teachers in our schools is one of much importance, and vested, as it is, in a board of school examiners who by personal examination are better qualified to survey and consider all the circumstances which should influence one in forming a judgment we should hesitate to interfere and will only do so in a case free from doubt, and of a gross perversion of duty.

Writ is denied.

QUESTIONS FOR EXAMINATION

FOR

STATE CERTIFICATES.

EXAMINATION AT BAY VIEW, JULY, 1890.

CHEMISTRY.

1. State the difference between chemical and physical changes. Illustrate.
 2. What is the law of definite proportions? Give an illustration.
 3. Give the proportions of oxygen. (a) Name two ways in which it may be obtained.
 - (b) What is its relation to combustion? (c) What are incombustible substances?
 4. Name a characteristic property of each of the following elements: Bromine, potassium, antimony, iodine and nickel.
 5. Write the symbol of aqua ammoniæ and interpret the same.
 6. What is an acid? A base? A salt? A metal? Mention some common acids.
- Bases.
7. How is quick lime prepared from limestone? What chemical change occurs?
 8. What are the principal forms in which carbon exists in nature? Name the forms in which pure carbon is found.
 9. What are the symbols for the following elements: Copper, iron, sodium, gold, silver, sulphur, magnesium, mercury.
 10. Give an account of the manufacture of gunpowder, and explain its explosive properties.

GEOLOGY.

1. When one says that Ingham county belongs to the "Carboniferous" on a geological map, what is meant?
2. Discuss the drift in Michigan, its character and probable origin, what evidence have we of its origin?
3. Describe the varieties and formation of coral reefs, accounting for the different forms.
4. What are stratified rocks? Igneous rocks? Crystalline rocks?
5. Draw a diagram showing how water is forced to the surface in Artesian wells.
6. What are fossils? Give a commonly accepted theory of petrification.
7. Name in their order the great ages of Geological history.
8. What are three great oceanic forces?
9. What is a geyser? Show by diagram a common theory of cause of the phenomena which distinguish geysers.
10. What are the differences between anthracite and bituminous coal in form and in the method of production.

THEORY AND ART.

1. Distinguish between the *science* and *art* of education.
2. What is attention? What is its relation to educational operations?
- 3-5. Give a brief outline of the mental faculties in the order of development, and define each.
6. What branches of study require the special exercise of the observing faculties?
7. What is the educational value of memory? Give some rules for its cultivation.
8. What conditions should determine the length of time given to recitations?
9. Name some of the moral habits which the public schools may be expected to lead the child to form.
10. What are the true ends of education?

PHYSICS.

1. What is a molecule? An atom? A body?
2. In how many and in what states may matter exist? Explain each.
3. Define sound. Give the commonly accepted theory of the propagation of sound.
4. Describe the barometer and explain the theory of its action.
- 5-6. What is heat? How is heat distributed? Describe each method.
7. Describe the process of producing an electro magnet.
8. Why does a mixture of salt and ice become colder than either substance?
9. What is a machine? Name the different forms of machines.
10. What is the mechanical difference between a high and low tone?

ENGLISH LITERATURE.

1. What influence upon English Literature had the different foreign invasions of England?
2. Define (a) didactic prose, (b) narrative poetry, (c) name one standard work in each.
- 3-5. Name one work of each of the following authors: Goldsmith, Cowper, Pope, DeQuincy, Coleridge, Emerson, Mrs. Browning. Write a brief review of two of the above works.
6. Name five of Dickens' works and the abuses at which two of them are aimed.
7. In what department of literature was each of the following noted: Motley, Webster, Washington Irving, Prescott, Jonathan Edwards?
8. Name two works of Thomas Carlyle and characterize his style.
9. Analyze, briefly, some character in any of the writings of Thackeray.
10. Give a brief account of the author of Childe Harold, and name five other works of which he is author.

GEOGRAPHY.

1. How would you explain to children the uses of the lines of latitude and longitude upon a map?
2. Describe the drainage system of the United States.
3. Write an outline of the Geography of your own county.
4. Write not more than twenty lines upon the Physical Michigan; describing the surface, mineral resources and natural products.
7. Bound the Russian Empire and describe briefly her resources and progress in civilization.
8. What can you say of the movement for the exploration and occupation of Africa?
9. Account for the fact that plateaus are usually deficient in rainfall.
10. What are the principal products of Central America?

ARITHMETIC.

Write out solutions.

1. If 4 ounces of gold 22 carats fine be mixed with 8 ounces of gold 18 carats fine, how much fine gold will there be in 6 ounces of the mixture?
2. A merchant sold a lot of cloth at \$3.00 per yard, and thereby gained 20 per cent. What per cent would he have gained if he had sold the cloth at \$3.75 per yard?
3. I invested in wheat the proceeds of a consignment of flour, less my commission on both at 3 per cent, which amounted to \$60.00. For what did I sell the flour, and what did I pay for the wheat?
4. If I insure a risk of \$10,000 at a premium of $1\frac{1}{2}$ per cent, and re-insure it at one-tenth per cent, what will be my gain?
5. What is the selling price of French plate glass that cost \$60.00 per light, from which 45 per cent may be deducted and 30 per cent gained on the cost?
6. Write a demand note. A receipt on account. A sight draft.
7. Reduce to a decimal $\frac{1}{2} - \frac{1}{4} - (\frac{1}{8} + \frac{1}{8}) \times \frac{1}{4}$.
8. What is the cost of 15 gallons, 1 quart, 1 pint of wine, at \$3.75 per gallon?
9. If 3 metres of gold chain cost \$383.87, what is its cost per inch?
10. What is the cube root of 3,265?

GENERAL HISTORY.

1. Name the five most powerful nations existing about one thousand years before the commencement of the christian era. Give the location of each.

2. What forms of government did the Romans establish during their existence as a nation? What was the duration of each form?
3. What elements in Grecian civilization have produced the greatest effects upon ours? What in the Roman?
4. What are the principal nations now existing, which were created out of the Roman Empire?
5. Where was the feudal system most firmly established, and what were its effects upon civilization? What causes led to its abolition?
6. What was the most important work which William ordered done for England after its conquest by the Normans?
7. What effects did the reformation produce upon the progress of civilization?
8. What were the chief causes which led to the English revolution, and what effects resulted therefrom?
9. What cause led to the Crimean war? What nations were engaged in it? When did it occur?
10. What cause led to the Franco-Prussian war? When did it occur? What nation was victorious? What terms did the victors impose upon the vanquished?

UNITED STATES HISTORY.

1. What spirit did the settlers of America bring with them from the old world?
2. What territory has the United States acquired by conquest? By annexation? By purchase?
3. State the causes of the revolutionary war; the war of 1812; the rebellion.
4. Describe the modes of travel in use one hundred years ago.
5. Describe the fugitive slave law.
6. For what purpose was the constitution of the United States adopted? What are free under the constitution?
7. Give a brief history of the District of Columbia.
8. Name some of the inventions which have been made during the nineteenth century.
9. What can you say of the political parties since the Civil War?
10. Mention the important laws passed by the present Congress.

BOTANY.

1. How are plants distinguished as to their term of life?
2. Name and describe the principal modes of root development.
3. Which class of crops require deep, and which shallow tillage? Why?
4. How are subterranean stems distinguished from roots?
5. What is a cion? An offset? A runner?
6. How does the stem of an oak grow? Explain fully.
7. Describe the parts of the leaf of the maple. What office does each part perform in the growth of the plant?
8. Describe the origin of flower buds.
9. How is fruit produced?
10. What external circumstances are requisite to healthy vegetation?

SCHOOL LAW.

1. What are the objects of law?
2. Name the officers of a school district and name the duties of each.
3. Why is it necessary that teachers should be examined and licensed to teach?
4. What teachers are excused from paying the institute fees?
5. From what sources are the funds for the support of the public schools derived?
6. What children are required to attend school, and how long each year?
7. How is the secretary for the county board of examiners elected?
8. Who are the voters at a district school meeting?
9. What jurisdiction has the teacher over the pupil outside the school building?
10. Has the teacher the right to use corporal punishment? What are proper punishments?

PHYSIOLOGY.

1. Describe the bones and their uses.
2. Explain the process of mastication.
3. Give a good method of ventilation.

4. What are the three organisms necessary to receive sensation?
5. Give some practical hints about the care of the eyes.
6. What would you do to stop bleeding from an artery? From a vein?
7. Describe in detail how disinfectants should be used.
8. What is the proper use of alcohol and tobacco?
9. What is the general effect of alcohol upon the nervous system? Is the use of alcohol safe?
10. Compare the human body with the steam engine, in order to illustrate work, waste and repair.

GRAMMAR.

1. 'twas the month of August fourteen hundred ninety-two
a daring navigator did sail the ocean blue
a loyal subject was he unto the queen of Spain
and by sailing westward across the billowy main
discovered the new world.
1. Rewrite, capitalize and punctuate the above selection.
2. Write it in good prose.
3. Give the independent sentences.
4. Give the adverbial phrases.
5. Parse the verbs.
6. What pronouns indicate by their form the gender of their antecedent nouns?
7. Discuss the relations of grammar to language lessons.
8. In teaching grammar do you consider the word, the phrase or the sentence the simple element?
9. What are the principal objects to be secured in the study of technical grammar?
10. Where would you place the subject of grammar in your course of study?

RHETORIC.

1. What relation has rhetoric to grammar?
2. Define the following figures of speech and give an example of each, simile, allegory, metaphor and irony.
3. Name and define five elements of style.
4. What are the essentials of good diction?
5. Give rules for paragraphing composition.
6. Illustrate the use of home-made names for inventions.
7. How do you teach your pupils to use new words?
8. What are necessary in order to write a good description?
9. What is the value of criticism?
10. Write a letter to your friend and name the different parts of the letter.

ZOOLOGY.

1. Define zoology. What are the objects of classification in zoology?
2. Describe the protozoa.
3. What is necessary to the healthy growth of animals?
4. What can you say as to the class of Aves?
5. Give the characteristics of the mammals.
6. Name and describe five animals which are specially provided with means for securing their food.
7. What are the general characteristics of reptiles?
8. How many ways of eating have animals? How do their digestive organs differ?
9. What different organs have animals for the circulation of the blood?
10. Compare the methods of breathing.

TRANSACTIONS

OF THE

MICHIGAN STATE TEACHERS' ASSOCIATION

AT THE

FORTIETH ANNUAL MEETING,

HELD AT

GRAND RAPIDS, MICHIGAN, DECEMBER 22, 23 AND 24, 1890.

STATE TEACHERS' ASSOCIATION.

Officers for 1890.

President.

J. G. PLOWMAN.....White Pigeon.

Vice Presidents.

ALEXANDER HADLOCK.....Kalamazoo.

C. N. KENDALL.....Jackson.

Secretary.

D. A. HAMMOND.....Charlotte.

Treasurer.

W. H. CHEEVER.....Three Rivers.

Executive Committee.

1887-90.

GEO. F. MOSHER.....Hillsdale.

MISS M. LOUISE JONES.....Lansing.

AUSTIN GEORGE.....Ypsilanti.

1888-91.

GEO. F. HUNTING.....Alma.

J. N. McCALL.....Ithaca.

ORR SCHURTZ.....Charlotte.

1889-92.

C. B. HALL.....Detroit.

B. A. HINSDALE.....Ann Arbor.

MISS ELLA E. HALLOCK.....Hastings.

Officers for 1891.

President.

ORR SCHURTZ.....Charlotte.

Vice Presidents.

J. W. SIMMONS.....Owosso.

C. T. GRAWN.....Traverse City.

Secretary.

E. M. RUSSELL.....Battle Creek.

Treasurer.

C. L. BEMIS.....Ionia.

Executive Committee.

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B. A. HINSDALE.....Ann Arbor.

MISS ELLA E. HALLOCK.....Hastings.

1890-93.

F. A. BARBOUR.....Ypsilanti.

MISS GEORGIA BACON.....Grand Rapids.

W. H. CHEEVER.....Lansing.

MICHIGAN STATE TEACHERS' ASSOCIATION.

TRANSACTIONS OF THE FORTIETH ANNUAL MEETING.

Grand Rapids, Monday, Dec. 22, 1890.

AFTERNOON.

Music: Piano solo—Miss Helen Kendall.

Devotional exercises—Rev. Dr. L. R. Fisk, Albion.

INSTITUTE SESSION.

Paper—"Institute Systems of Other States."—Prof. B. A. Hinsdale, Ann Arbor.

Paper—"Objects of Michigan Teachers' Institute at the Present Time."

—Supt. T. L. Evans, Eaton Rapids, Secretary E. F. Law, Yale.

Discussion led by Prof. I. N. Demmon, Ann Arbor; Supt. Wesley Sears, Jackson, and Supt. W. W. Chalmers, Grand Rapids.

General discussion participated in by Supt. Brooks, Mancelona; Supt. Demoray, Edmore; Supt. Miller, Ludington; Prof. Hinsdale, Ann Arbor; Supt. Gulley, Mason; Prof. Putnam, Ypsilanti; Supt. F. O. Wickham, Frankfort; Secretary Orr Schurtz, Charlotte.

Prof. Hinsdale offered the following resolution which was adopted:

Resolved, That the chair appoint a committee of five to inquire and to report to this meeting, what steps can be taken, if any, to render the institutes of the State more helpful to the teachers.

In pursuance of the resolution, the president appointed as such committee, Prof. Hinsdale, and Messrs. Church, Law, Miller, Schurtz.

Mr. H. R. Pattengill moved that a committee of five be appointed to report at an early date a resolution concerning the system of county supervision, carried.

Music: Song—Mrs. D. B. Sheld, accompanist Mrs. Phelps.

MONDAY EVENING 7:30 O'CLOCK.

Music: Song—Mr. L. Eddy.

Address of Welcome—Hon. Edwin F. Uhl, Mayor of Grand Rapids, then delivered the following

ADDRESS.

The city which you have selected as the place of holding this the annual meeting of your association, and in which you now meet, speaking through its municipal representative, is pleased to express to you its appreciation of this choice, and its acknowledgments therefor.

It has fallen to me during the few months that I have represented the city as its official head, to say a brief word of welcome to many societies and organizations which have honored this city by making it the place of their annual reunion, or meeting; but in the case of none has a gathering been fraught with more interest to the city than is your own. Let me say in the outset that you will not here move in a literary atmosphere such as envelopes the "Athens of Michigan," the seat of its great University, and its neighbor city in which is located the State Normal School; you will not here find for your entertainment a great library like that at the capitol city where you have been wont to meet; you have selected a city which is intensely devoted to business, whose people are, mainly, earnestly engaged in the many activities of manufacture, of traffic and of trade; a city where the fruits and product of education, however, are manifest, where the cunning of the designer, the skill of the artisan, the muscle of the laborer, and the executive control of the director and manager of large enterprises are all called into play; a city in whose shops nearly fifteen thousand skilled operatives are employed, and whose annual output of manufactured products brings back yearly many millions of dollars; a city whose legitimate population is about 75,000, which has increased from 32,000 in 1880; whose school population between the ages of five and twenty is 16,547. To a city thus populated and whose people are thus engaged and employed, the subject of the common school, its curriculum and its policy, is of the first importance. Nor has this city been unmindful of the wants and claims of her children seeking the advantages of her schools. She has erected and now maintains twenty-six school buildings, and her school property exceeds in value the sum of \$710,000; 10,752 pupils were enrolled in her schools during the past year, 258 teachers were employed, and the total annual cost of superintendence and instruction was \$122,392.90 or a cost per capita of \$19.26.

Hence we confess that we are not altogether unselfish in bidding you a cordial welcome here; for we realize that the influence for good upon our great body of teachers, and upon our schools, of such a gathering of educators from all parts of the State, is of great value. Not alone is the city in which you, for the time being, chance to meet, interested in such a gathering, but the entire State is deeply concerned in every endeavor that tends to the betterment of her system of public instruction. It is the highest act of wisdom on the part of the State, as well as the evidence of an advanced civilization, to provide adequate means for the education of the young.

Said Lord Macaulay, on one occasion, "On one point are all the disputants agreed; they unanimously acknowledge that it is the duty of every government to take order for giving security to persons and property of the members of the government. This being admitted can it be denied," said he, "that the education of the common people is a most effectual means of securing our person and our property?"

Said Lord Brougham, in a speech in the House of Commons, "I trust more to the schoolmaster armed with his primer than I do the soldier in

full military array, for upholding and extending the liberties of his country."

Educators, what an exalted vocation is yours, and how it towers above all other secular callings in its beauty, in its power, and in its far reaching influence! How lasting are the results of your life work! You manipulate the finest material, for you work upon and mould immortal minds. The product of such labor, well bestowed, is eternal. In the words of another, "It is the one peak that rises above all clouds, it is the one star that darkness cannot quench."

Daniel Webster once said, "If we work upon marble, it will perish; if we work upon brass, time will efface it; if we rear temples, they will crumble into dust; but if we work upon immortal minds, if we imbue them with principles, with the just fear of God and love of our fellow men, we engrave upon those tablets something that shall brighten to all eternity."

Addison has written, "I consider a human soul without education like marble in the quarry which shows none of its inherent beauties until the skill of the polisher fetches out the colors, makes the surface shine, and discovers every ornamental cloud, spot or vein which runs through the body of it. Education, after the same manner, when it works upon a noble mind, draws out to view every latent virtue and perfection which, without such helps, are never able to make their appearance."

I submit that you are to be congratulated that your lines of labor have been cast in this fair Peninsular State. I have often had occasion to say that among all the excellencies and glories of the State of Michigan, her system of public education is the choicest jewel in her crown. Not long ago on an occasion similar to this, I said, referring to our system of education, what I now beg leave in part to repeat.

With just pride do we point to our varied material resources and our great business enterprises; to a soil in certain portions of the State so rich that you "but tickle it with a hoe and it laughs with a harvest," to the boundless wealth above and hidden beneath its surface; to the health giving influences of these great inland seas that wash her shores, to her manufacturing interests now well developed. But better than all to the men and women of Michigan, and to the system of public instruction for the education of its youth, from the district school up to its crowning glory, the University of Michigan, embracing the entire field of education.

The years 1835, 1836 and 1837 constitute an epoch in the educational history of the State of Michigan, more important perhaps than any other, for during those years the foundation of her system of public instruction was laid upon a principle so broad, so comprehensive, so far-reaching and so admirably adapted to the future needs and the future development of the State, as to challenge at once our wonder and our most profound admiration.

In 1835 a State constitution was adopted at a convention held in Detroit. In the month of October following it was ratified by the people of the territory, and in January, 1837, Michigan was admitted into the Union. Two men whose names should ever be held in grateful remembrance by every son and daughter of the Peninsular State, Gen. Isaac E. Crary, the first Representative in Congress from Michigan, and John D. Pierce, better known as "Father Pierce," were chiefly instrumental in directing the actions of the convention on the subject of education. Gen. Crary was a member of the convention. Both made a close study of Cousin's report on the system of education. Gen. Crary was

chairman of the committee on education. This committee reported an article which was adopted by the convention, providing that there should be appointed a superintendent of public instruction who, like the minister of public instruction in Prussia, should have the supervision of all the schools, and who should hold his office for two years, and whose duty should be prescribed by law.

In 1835, Stevens T. Mason became Governor, and in the following year, upon the recommendation of Gen. Cray, appointed Hon. John D. Pierce Superintendent of Public Instruction, the first that ever held the office in this country under State government; an office modeled and formed after that of the Minister of Public Instruction in Prussia. Mr. Pierce prepared and submitted to the Legislature in January, 1837, a complete plan for the organization of schools, and a plan for the organization of the University. This plan was practically embraced in an act passed March 18, 1837.

Upon the foundation thus laid, with profound wisdom and with wonderful foresight in piercing the future and forecasting the coming needs of the State, has been built the superb superstructure of our system which has made the State renowned wherever on the face of the globe learning is respected, in the strengthening, expanding and beautifying of which you are now engaged.

A leading journal in a great city, but a short time since, speaking of our school system, said: "The Michigan University occupies a unique position in the affections of western people. As it is the greatest of state universities, so it is the chief promoter among all American institutions of learning of our American spirit and methods. It is the crowning triumph in America of the public school system given to Germany by Fichte, and adopted with swift intelligence and far seeing wisdom in the Peninsular State more than fifty years ago."

But the end is not yet. Perfection is by no means reached, and this is your incentive to work for still greater results.

As from time to time some intellectual meteor suddenly bursts above the horizon of man's endeavor, and as in a twinkling opens up new worlds of advancement in science, in invention and in progressive thought, we are almost persuaded that instead of nearing the zenith of a perfect civilization, we are yet only "at the cock crowing and the morning star."

And now I bespeak for your annual convocation the utmost of profit and the utmost of pleasure. May you carry with you such agreeable impressions of our city and her people as shall make you think that it is good to have been here, and desire to come again.

Mayor Uhl concluded his address by reading invitations from the Bissell Carpet Sweeper Company, Nelson, Matter and Company the Phoenix Furniture Company, the Grand Rapids Brush Company, Berkey and Gay Furniture Company and others to visit their several factories and sales-rooms.

He also invited the teachers to a reception to be given in their honor, by the city authorities and board of education in the City Hall on Tuesday afternoon from 4 to 6 o'clock.

RESPONSE BY HON. FERRIS S. FITCH SUPERINTENDENT OF PUBLIC INSTRUCTION.

MR. PRESIDENT—In behalf of the State Teachers' Association, I thank the honorable gentleman, Mayor Uhl, and the citizens of Grand Rapids, for the hospitality of their fair and flourishing city, to which they have so generously welcomed us.

And now, fellow teachers, as I am here without any elaborately prepared address, I have resolved to confine myself to calling your attention briefly to a single phase of the educational problem of the day.

Even before I entered the teaching profession, and very frequently since I have been deeply and painfully impressed by the marked separation between the life and work of the schools and the practical business life of the world.

This thought has doubtless occurred to every one of you when you have labored in vain to interest an indifferent community in the work of your schools and to secure an outward manifestation of interest in the form of visitation. Indeed it is a fact that requires no argument or proof, and my only reason for referring to it here is to remind you that this is the greatest obstacle that lies in the way of educational reform. It is this that makes it less difficult to accomplish a social, religious, industrial or political reform than to reform our school laws.

Then it behooves us to get at the root of the evil and suggest a remedy. For my own part I can see but one remedy and that fortunately lies in the hands of the teachers themselves. Are the teachers of the State doing their full duty in the way of aiding educational reforms? I think not.

Let me cite a single illustration. While our University outtops the universities of the middle and western states and our high schools are second to none in the whole country, it is a lamentable fact that our district schools lag behind those of our sister states. Among the underlying causes may be mentioned imperfect management and supervision, the great diversity and frequent change of text books, the short and uncertain tenure of teachers, the lack of a uniform system of grading and classification, and the inequality in the distribution of the burdens and benefits of education.

All these and other evils seem to be inherent in and inseparable from our plan of independent school districts, and to the great majority of educators in this and other states, the only escape from these evils seems to lie in the "township unit" plan, that of combining the several schools of each township under one board of management, as the several ward schools of our cities are combined and as the country schools of Indiana and several other states have already been successfully combined. But certain self-constituted mentors of the people and inquisitors of state and legislative candidates have by persistent activity succeeded in awakening a blind prejudice in the farming community sufficient thus far to defeat all efforts at reform.

Now, I should have to become a disbeliever in the principles of popular government and to lose all faith in the intelligence of the people before I could believe that the great majority of the country people can not be made to see the evils of our present disjointed district system and the advantages of the township unit plan. It is but natural that they should be absorbed in the practical matters connected with their hard struggle for subsistence and hence find little if any time to study the question. They

have been deceived by first appearances and by the words of those who, from calling themselves farmers, have exercised a powerful influence over them. Who shall enlighten them? Who, if not the teachers of the district schools? If they would but improve their many opportunities when they meet the patrons of the school in the home and social circle, to show them how the efforts of the teacher are paralyzed, the time and opportunities of the pupil dissipated, and the money of the parent squandered by the present system, reform would follow as surely as light follows the sun. Their influence would spread "as quietly as the rain falls in the fleece of wool, even as the drops that water the earth," and yet as powerfully as the political avalanche that sweeps away thrones and scepters from the path of human progress. This does not require that the teacher should talk to one family about the children of another family, nor tell tales out of school. It requires merely that he should make the higher phases of his professional work his frequent theme of conversation instead of talking only about such trifles as the gossip of the neighborhood or lacking entirely for a subject of conversation.

There is need of more thorough organization of the teachers of the several counties into associations and a more active discussion of this and other educational problems, so that a livelier interest and more correct views may be disseminated not only among the teachers but through their agency, among the general public. In this way it is the duty of teachers to enlist their patrons on the side of educational reform.

As a believer in the tenets of Jeffersonian democracy, I hold that laws should not go in advance of popular sentiment; that reforms should not be imposed upon the people but should spring from the people; and that all reforms should be accomplished by first educating the people. Then I exhort you, my fellow teachers, to interest yourselves and make your influence felt in this, the greatest educational problem of the day. It concerns your own interests, the welfare of the rising generation, the glory of our State.

Music: Song—Mrs. F. M. Davis, (encore).

President's address—"The Michigan Boy a Citizen"—J. G. Plowman, White Pigeon. At the close of his address the president appointed the following committee on county supervision: Supt. W. S. Perry, Ann Arbor, Pres. L. R. Fisk, Albion, Supts. H. N. French, Kalamazoo, A. B. Perrin, Reed City and Principal J. N. B. Sill, Ypsilanti.

Music: Violin Solo—Miss Nellie Udell.

TUESDAY 9 A. M.

Devotional exercises—Pres. Chas. Scott, Hope College.

Music: Violin Duo—Miss Udell, Mr. Lamson (encore).

COLLEGE SESSION.

Paper—"Preparation in history for college work," Prof. Richard Hudson, of the University of Michigan.

Discussion—Prof. Webster Cook, Detroit High School.

Paper—"The comparative merits of the lecture and text-book methods of teaching," Prof. C. E. Barr of Albion College.

Discussion—Prof. J. H. Kleinheksel of Hope College.

The president here appointed the following committees: Resolutions—

Supt. W. D. Clizbe, Ionia; Supt. E. M. Russell, Battle Creek; Miss Emma Rice, Lawrence. Nominations—Prin. C. B. Hall, Detroit; Prof. Austin George, Ypsilanti; Miss Cora Cummings, White Pigeon; Mrs. Ferguson, Howard City; Prof. I. N. Demmon, Ann Arbor.

Reception—Prof. E. A. Strong, Ypsilanti; Supt. J. N. McCall, Ithaca; Supt. D. B. Yntema, St. Johns; Miss Elnora Cuddeback, Alma; Miss Mara Titus, Charlotte.

Committee to investigate Miss Stout's method of teaching reading: Prof. D. Putnam, Ypsilanti; Dr. Chas. Scott, Hope College; Supt. W. H. Cheever, Lansing.

Paper—"Sphere of the Michigan Agricultural and Mechanical College,"—Pres. O. Clute, of the Agricultural College.

On account of the lateness of the hour the discussion of this paper was dispensed with.

At this stage in the proceedings, 800 school children of the 4th, 5th and 6th grades of the Grand Rapids City Schools came in and filled the body of the church while the audience filed into the galleries. Under the direction of Prof. Shephard of Grand Rapids, the children rendered some fine selections of music. They covered themselves with glory in "Hail, Jolly Old Santa Claus," and in exercises on the scale, and in transition. Their singing was a genuine treat.

The exercises of the morning closed with "America"—all joining in the singing.

TUESDAY AFTERNOON.

Music: Alto Solo—Miss Emma Loomis.

Grading of Country Schools.

Paper—"History of the Movement in other States,"—Mr. Fred Chamberlain, Grand Rapids.

The Secretary read a telegram from Mr. Chamberlain who was in Iowa, stating his inability to reach Grand Rapids. His paper was omitted.

Paper—"History of the movement in Michigan,"—Secretary R. A. Culver, Tekonsha.

Paper—"Objects to be gained,"—Secretary Orr Schurtz, Charlotte.

Paper—"Objections and Difficulties Considered,"—Secretary C. L. Bemis, Ionia.

The discussion went over to the morning session.

Prof. D. Putnam who was to lead being obliged to leave for home handed in his paper discussing the question.

A resolution was passed fixing the fee for Carleton's lecture at fifty cents for all who had not joined the association.

The association then adjourned for the purpose of attending the reception tendered by the Mayor and Board of Education of Grand Rapids. The reception was held in the city hall from 4 to 6 o'clock. The spacious halls and rooms were brilliantly lighted with electricity and a band stationed in the hall, discoursed some fine music. The occasion was greatly enjoyed by everybody.

TUESDAY EVENING 8 O'CLOCK.

Music: Tenor Solo—Prof. Pearson.

Address—"Chain of Success,"—Will Carleton, Brooklyn, N. Y.

Mr. Carleton was received with applause and carried his audience with him from the start. Everybody was charmed with his lecture.

WEDNESDAY MORNING.

Music: Flute Solo—Hobert Davis.

Reports of Committees.

Committee on Institute Instruction made the following report:

The committee appointed to inquire and report what steps should be taken, if any, to render the institute of the State more helpful to the teachers, begs leave to submit its report.

The Michigan State Teachers' Association in session at Grand Rapids, December 23, 1890, after full discussion and deliberation adopts the following resolutions:

1. That the State Superintendent of Instruction be requested to hold at Lansing, about the first of July, 1891, a conference of such persons as he may choose, to act as institute conductors, and of instructors, as far as possible, for the discussion of the amount and kind of work to be done in the institutes the ensuing year.
2. That a course of institute instruction extending over two years should be prepared, and, as far as practicable, be put into immediate operation.
3. That the State Superintendent be requested to appoint as institute conductors and instructors only such persons as he is reasonably certain, either from personal knowledge or from diligent inquiry, possess eminent qualifications for the work that they are to do, regardless of solicitations from other sources.
4. That in some parts of the State the one week institute is a practical failure. Successfully to train the non-professional teacher by a few lectures extending over that time is an utter impossibility. It is therefore highly desirable that whenever the conditions admit of it, an extension of the time to two weeks at least is extremely desirable.
5. That a more careful and business-like use of the institute funds is demanded. These funds are not always employed in a manner to secure the greatest amount of good. The cost of evening lectures is sometimes out of proportion to their value. Furthermore, it is believed that strict attention to the recommendations hereinafter made concerning the county Secretaries will conduce to economy of expenditures.
6. That the County Secretary should be identified with the institute as closely as possible. In many cases he may profitably be employed as one of the regular instructors. Moreover, the routine work, such as making out and keeping the roll announcing the daily programs, filling out certificates of attendance, and making the report to the State office, should by law be made a part of his official duties. Such an identification of the secretary with the institute, besides making the institute more effective, will materially strengthen that officer with the teachers and the people of the county.
7. That the secretary's salary should be adjusted with reference to his rendering such service, as it would be inadvisable to draw upon the institute funds for that purpose.
8. That the law should be so amended as to identify the county secretary with the county institute in the manner set forth in the previous resolutions; and we respectfully petition the Legislature, at its approaching session, to enact the needed legislation.
9. That until such legislation can be had, the State Superintendent should, as far as he can do under the law, seek to effect such an affiliation of the secretaries and the institutes, and that we respectfully request him to take such steps as will secure that end.

10. That we deprecate the holding of summer normals and institutes by members of the county board that can in any way conflict with the interests and success of the institutes in their several counties.

Adopted unanimously.

Committee on county supervision reported as follows:

Your committee appointed to consider the present method of county school management begs leave to present the following expression of opinion:

The progress of educational reform has often been slow and halting, made so largely by its frequent retreats and redoubling upon its course.

The present system of county board of examiners and enlarged powers of the county secretary have been secured by much patient thought and earnest struggle of the friends of education.

Now, to abandon this system and to return to the loose, irresponsible methods that preceded the advent of the present system, we believe would be to yield an important vantage ground, and to settle back into conditions that have never given us good schools or efficient teachers.

We believe the only wise and safe thing to do is to push forward and give the present system a full, fair trial.

W. S. PERRY,
L. R. FISKE,
H. N. FRENCH,
A. B. PERBIN,
Committee.

Adopted unanimously.

Committee on resolutions reported as follows:

The committee on resolutions would respectfully report the following:

Resolved, That the State Teachers' Association of Michigan, assembled in their fortieth annual meeting does hereby tender its sincere thanks:

1. To the honorable mayor and council and to the citizens of Grand Rapids, who by their cordial welcome and by their presence and enthusiastic interest in our sessions, have so greatly contributed to the pleasure and success of our meeting.

2. To Prof. Shephard and his associates, for the delightful music afforded us; by no means forgetting the chorus exercise by the six hundred public school children. Also to Sup't. W. W. Chalmers and his associate teachers on whom so many burdens in connection with our meeting have fallen.

3. To the First Baptist church for the use of its beautiful and commodious edifice.

4. To the hotels of Grand Rapids for reduced rates and excellent entertainment, and to the railroads in Michigan for reduced fares.

5. To the officers of the Association and to the participants in the exercises of the program.

Resolved, That we show our hearty appreciation of the courtesies extended to us by requesting our executive committee to arrange for our next meeting in the city of Grand Rapids.

W. B. CLIZBE,
E. M. RUSSELL,
EMMA RICE,
Committee.

Adopted unanimously.

Committee on nominations reported as follows:

For executive committee 1890-93—Prof. F. A. Barbour, Ypsilanti; Miss Georgia Bacon, Grand Rapids; Supt. W. H. Cheever, Lansing.

For first vice president—Supt. J. W. Simmons, Owosso.

For second vice president—Supt. C. T. Grawn, Traverse City.

For secretary—Supt. E. M. Russell, Battle Creek.

For treasurer—Secy. C. L. Bemis, Ionia.

C. B. HALL,
AUSTIN GEORGE,
CORA CUMMINS,
MRS. FERGUSON,
I. N. DEMMON,
Committee.

Adopted unanimously.

The association next proceeded to ballot for president, and elected Orr Schurtz of Charlotte on the first ballot.

Committee on Miss Amanda Stout's method of reading reported the following:

The committee appointed to confer with Miss Amanda Stout in relation to her method of teaching reading report that they have performed the duty assigned them as thoroughly as the very limited time at their command would allow. Time does not permit us to give any extended account of the method. We can only say that we were interested in Miss Stout's explanations, and we would suggest that the superintendent of schools in Grand Rapids, if circumstances will allow, give opportunity for fully testing the method, and that at some time in the future, he give to the association the results of such tests.

CHARLES SCOTT,
W. H. CHEEVER,
D. PUTNAM,
Committee.

Paper—"Physical Culture"—Mary A. Blood, Principal Columbia School of Oratory, Chicago.

PRIMARY SESSION.

Paper—"Science Teaching in Primary Grades"—Miss Nina C. Vanderwalker, Ypsilanti.

Discussion opened by Supt. W. H. Honey, Monroe.

General discussion participated in by Supts. McCall, Ithaca; Albert Jennings, Manistee; J. C. Bryant, Montague.

Paper—"First Steps in Number Work,"—Mrs. Mary C. Stanton, Bay City.

When the paper was called the Secretary read a telegram from her saying that she was detained at home on account of illness. A letter was also read from Supt. Kendall saying that he had been called to New England by the serious illness of a friend, and could not be present.

This part of the program was then omitted.

The discussion of the paper upon the "Grading of the Country Schools" was here resumed. The discussion was participated in by Principal C. B. Hall, Detroit; Principal C. F. Wade, Elm Hall; Supt. F. E. Stroup, Midland; and Secretary E. A. Wilson, Tecumseh.

Music: Song—Miss C. Goodman.

The treasurer's report was read as follows:

TREASURER'S REPORT—MICHIGAN STATE TEACHERS' ASSOCIATION.

RECEIPTS.

Received from former treasurer.....	\$224 91
Additional dues.....	2 00

Interest	\$3 00
Membership fees	334 50
Will Carleton's lecture	135 00
Total	\$699 41

EXPENDITURES.

Miss Ford, stenographer	\$15 00
Expenses, executive committee	32 46
Express	75
D. D. Thorp, membership tickets	2 25
D. D. Thorp, printing proceedings, 1889	70 00
Will Carleton's lecture	100 00
West Mich. Printing Co.	1 25
J. G. Plowman, itemized bill	30 00
D. A. Hammond, itemized bill	4 74
D. A. Hammond, itemized bill to Ainger and Baxter	24 25
D. A. Hammond, itemized bill	22 18
Total	\$303 48
Amount on hand	\$395 93

W. H. CHEEVER,
Treasurer.

Report accepted and adopted.

The association directed that the next meeting be held in Grand Rapids.

On motion of Supt. McCall the executive committee was directed to procure a popular lecturer for next year's association.

Miss Blood here gave a five minute talk on calisthenics.

Miss Field gave an explanation of the instruction frame on exhibition by Houghton, Mifflin & Co.

President Plowman thanked the association for the hearty support they had given him in the discharge of his duties, and introduced the new president, Orr Schurtz of Charlotte.

Mr. Schurtz made a short speech of acceptance and adjourned the association.

D. A. HAMMOND,
Secretary.

J. G. PLOWMAN,
President.

LIST OF MEMBERS
OF THE
MICHIGAN STATE TEACHERS' ASSOCIATION, 1891.

Andrus, Mrs. Enoch, Hastings.
Andrus, W. M., Elk Rapids.
Ames, Florence, Grand Rapids.
Aldrich, Grace, Bowne.
Aldrich, May, Bowne.
Andrus, Harry, Hastings.
Andrews, J. W., South Boardman.
Andrus, Enoch, Hastings.
Arnold, Libbie, Big Rapids.
Andrews, Ella, Frankfort.
Allen, Cora, Coldwater.
Allen, Jennie, Vermontville.
Albert, Julia, Ravenna.
Allen, Ida, Canada Corners.
Barbour, F. A., Ypsilanti.
Boynton, Miss E., Grand Rapids.
Boynton, Gertrude, Grand Rapids.
Brooks, E. L., Mancelona.
Boyer, Ella, Westville.
Bronson, J. J., St. Joseph.
Bemis, C. L., Ionia.
Bryant, James C., Montague.
Bradley, E. P., Coldwater.
Bradley, L. May, Coldwater.
Broessamle, Geo. H., Imlay City.
Blodd, Miss F. M., Grand Rapids.
Boies, Mrs. W. E., Grand Rapids.
Brown, Alice, Grand Rapids.
Briggs, Mrs. E. L., Grand Haven.
Brown, E. N., Allegan.
Brothers, Mrs. Florence, Grand Rapids.
Brown, Florence, Reed City.
Burch, Carrie, Grand Rapids.
Bettes, Lucy, Grand Rapids.
Brown, Viola, Coldwater.
Bacon, F. A., Middleville.
Bissell, W. C., Richland.
Bates, Geo. E., Orion.
Bates, Mrs. Ella, Orion.
Baker, Jessie, Springport.
Bishop, Bertha, Leroy.
Benjamin, Anna, Zeeland.
Brown, Hugh, Pontiac.
Biscomb, J., Newaygo.
Biscomb, Mrs. J., Newaygo.
Brown, Lizzie A., Charlotte.

Blodgett, Chas. L., Ann Arbor.
Brewer, Jessie, Dundee.
Blakley, Miss A., Grand Rapids.
Burdon, Lillian, Grand Rapids.
Barr, S. D., Albion.
Beman, W. W., Ann Arbor.
Brown, J. F., Centreville.
Brown, P. M., Big Rapids.
Boer, Addie M., Grand Haven.
Braley, Frank W., Palo.
Bacon, Georgia, Grand Rapids.
Bodwell, M. Lizzie, Bear Lake.
Bishop, Lana, Grand Rapids.
Bailey, Susie, Grand Rapids.
Bowen, W. P., Ypsilanti.
Ball, Julia, Benton Harbor.
Bennett, Jennie E., Grand Rapids.
Barnard, Jennie M., Grand Rapids.
Brown, Flora, Berlin.
Boyce, Mary, Sparta.
Bailey, Bert H., Palo.
Bailey, Ella, Grand Rapids.
Buchanan, Alice, Plainwell.
Bailey, Hattie M., Grand Rapids.
Briggs, E. L., Grand Haven.
Barbour, Mrs. Frank, Caledonia.
Bicknell, Louetta, Cedar Springs.
Butler, Hattie, Morley.
Barker, Nellie, Fennville.
Barton, H. H., Muskegon.
Barton, Ella M., Muskegon.
Bowmaster, Myra J., Hudsonville.
Bailey, Lotta, Grand Rapids.
Barr, Chas. E., Albion.
Corbin, Julia, Hesperia.
Clarke, J. R., Woodland.
Cook, Daniel G., Vriesland.
Cilley, Earl, Lamont.
Converse, Frank, Pontiac.
Chapman, W. E., Sparta.
Coburn, Seth, Zeeland.
Clark, Helen, Grand Rapids.
Cobb, F. I., Martin.
Cupples, J. W., Corunna.
Cook, Webster, Detroit.
Clute, O., Agricultural College.

Chatfield, L. O., Benton Harbor.
 Clark, Carrie A., Belmont.
 Cook, W. G., Birmingham.
 Cook, Hattie, Detroit.
 Cadwell, Mary, Ionia.
 Cornell, Aggie, Grand Rapids.
 Cooney, Ella, Dennison.
 Cheever, W. H., Lansing.
 Conklin, Flora B., Springport.
 Cogshall, Chas. H., Labarge.
 Creager, Minnie, Gooding.
 Carson, O. H., Lansing.
 Church, E. P., Cadillac.
 Crowell, Florence, Grand Rapids.
 Cuddeback, Elnora, Alma.
 Chalmers, W. W., Grand Rapids.
 Catton, Geo. R., Kalkaska.
 Cole, Ida, Grand Rapids.
 Chappell, Cassa, Berlin.
 Clapp, Ashley, Kalamazoo.
 Conklin, W. E., Galesburg.
 Cornell, Miss F. C., Coldwater.
 Cargill, Miss C. M., Grand Rapids.
 Cummings, Miss E. E., White Pigeon.
 Chase, Nelly, Grand Rapids.
 Chick, Nettie, Mantou.
 Chandler, Georgia, Cadillac.
 Dasef, J. W., Pierson.
 Demoray, A. N., Edmore.
 Daggett, Mary, Whitehall.
 Daniels, Sadie, Grand Rapids.
 Daniels, Fannie, Grand Rapids.
 Davenport, Miss L. A., Grand Rapids.
 Dimmock, Mae, Grand Rapids.
 Dockery, Ella, Rockford.
 Dickey, Miss J. C., Grand Rapids.
 Durkey, Emma A., Greenville.
 Dillenback, Dora, Grand Rapids.
 Densmore, A. E., Maple City.
 Doxzie, Georgia, Grand Ledge.
 Davis, W. W., Ludington.
 Demmon, I. N., Ann Arbor.
 Docter, Anna, Holland.
 Donovan, Kate, Decatur.
 Dennison, Eva, Grand Rapids.
 Davis, W. H., Lake View.
 Dalley, Mrs. N. M., Dowagiac.
 Drew, Earl, Sunfield.
 Deffendorf, Lura, Dowagiac.
 Easton, Lillian, Grand Rapids.
 Elderkin, Tessie, Altona.
 Evans, T. L., Eaton Rapids.
 Engall, Allie, Portland.
 Enos, H. M., Charlevoix.
 Emery, Evan, Luther.
 Everhart, Eloise, Grand Rapids.
 Everest, Miss Louie, Lyons.
 Everest, Wilma, Saranac.
 Fanson, Mary, Eaton Rapids.
 Fay, Emma, Grand Rapids.
 Ferguson, Hattie, Grand Rapids.
 Ferguson, Mrs. S. C., Howard City.
 Field, Bertha, Ballards.
 Field, Edith, Ballards.
 Field, Emma, Grand Rapids.
 Fiske, L. R., Albion.

Fisher, G. C., Muskegon.
 Forbes, Ira L., Vassar.
 Fortney, Frank, Charlotte.
 Fox, Florence C., Lansing.
 Foxworthy, H. C., Haire.
 French, H. N., Kalamazoo.
 Finn, Alice, Grand Rapids.
 Finn, Nellie, Grand Rapids.
 Fisk, G. M., Cassopolis.
 Flanagan, May, Orleans.
 Flanagan, Aurea, Saranac.
 Fox, Chas., Brown City.
 French, W. H., Litchfield.
 Fuller, S. Alice, Greenville.
 Garman, Lillian, Centerville.
 Gafney, Mary, Auburn.
 George, Austin, Ypsilanti.
 Gilpin, Lucinda, Sunfield.
 Golds, Mate, Ada.
 Gotta, Edith G., Muskegon.
 Grawn, C. T., Traverse City.
 Greene, Elcina, Hartford.
 Gulley, R. H., Mason.
 Goodenow, Cora, Berlin.
 Graves, M. O., Petoakey.
 Gregor, B., Thornville.
 Gregg, U. C., Standish.
 Gregg, Mrs. Myrtie, Standish.
 Halsey, Leroy, Chicago.
 Harris, Ella, Hartford.
 Harlow, Fred M., Springport.
 Hartwell, S. O., Kalamazoo.
 Hall, C. B., Detroit.
 Hall, Mrs. L. E., Manistee.
 Hallock, Ella, Hastings.
 Hamilton, Cora, Coopersville.
 Hammond, D. A., Charlotte.
 Hanchett, Lizzie, Grand Rapids.
 Harvey, Will, Bangor.
 Haskins, D. E., Concord.
 Hasting, Ella, Big Spring.
 Hasting, Winnie, Coopersville.
 Hawley, Hattie, Rockford.
 Hawley, Hattie R., Grand Rapids.
 Healy, Lizzie, Gobles.
 Hinsdale, B. A., Ann Arbor.
 Hill, Nellie F., Kalamazoo.
 Hill, Mrs. Jennie K., Grand Rapids.
 Holton, Mrs. Carrie A.
 Houston, J. D., Marshall.
 Howard, E. D., Three Rivers.
 Humphrey, J. W., Holland.
 Humphrey, Clara, Holland.
 Hayes, Emma B., Springport.
 Hetley, J. H., Shelby.
 Herrod, Ada, Kent City.
 Higgins, S. E., Holland.
 Hill, W. D., Lawton.
 Hinckley, Cora, Paw Paw.
 Hogmire, Anna, Hartford.
 Holzenger, Marie, Eaton Rapids.
 Honey, W. H., Monroe.
 Hoppin, Ruth, Ann Arbor.
 Hope, Cora, Big Rapids.
 Hooper, Lizzie, N., Dalton.
 Houghtaling, Jennie, Howell.

Houghton, S. L., Detroit.
 Howland, Jennie, Grand Rapids.
 Hoyle, Nellie, Cedar Springs.
 Hoyt, Chas. O., Jackson.
 Hudson, Richard, Ann Arbor.
 Hunter, May, Lowell.
 Hyde, Clara, Grand Rapids.
 Hyde, Myrtie, Rockford.
 Irving, Anna, Bangor.
 Jamison, S. J., Mount Pleasant.
 Jennings, A. F., Manistee.
 Jennison, Kittie, Manton.
 Jeffers, Fred A., Ypsilanti.
 Jennings, Albert, Manistee.
 Jennings, A. T., Manistee.
 Johnson, Bertha, Ballards.
 Johnson, Edwin, Olivet.
 Johnson, Lellie, N. Muskegon.
 Jones, Mina, Lowell.
 Jordan, Lou, Grand Rapids.
 Key, George, Ypsilanti.
 Keeler, E. Morenci.
 Kimes, Emma, Ypsilanti.
 Kingston, Angie, South Haven.
 Kittell, W. E., White Pigeon.
 Krubner, Katie, Maple City.
 Krell, Carrie, Grand Rapids.
 Kleinheksel, John H., Holland.
 Kerr, Mary E., Grand Rapids.
 King, Florence E., Grand Rapids.
 Knettle, Ida M., Grand Rapids.
 Laird, S. B., Dowagiac.
 Laraway, Frank O., Shelbyville.
 Laraway, Stella, Grand Rapids.
 Larzelere, C. S., Lowell.
 Lawrence, G. C., Williamston.
 Leisenring, L. W., Bellevue.
 Lee, Fannie, AuSable.
 Lewis, Mabel, Allegan.
 Lewis, Nellie, Martin.
 Lillie, Lou, Coopersville.
 Linderman, Olive, Grand Rapids.
 Lowes, Winnie, Grand Rapids.
 Lumley, J. E. W., Detroit.
 Lunakee, John J., Corinth.
 Luten, Jennie, Grand Rapids.
 McAllister, Lida, Kalamazoo.
 McCall, J. N., Ithaca.
 Macomber, Jennie E., Kalamazoo.
 McDonald, J. E., Tawas City.
 McCloskey, J. E., Sheridan.
 McNamara, Wm., Wayland.
 McKone, W. J., Almont.
 Mayhew, Emma, Detroit.
 Mickens, C. W., Utica.
 Miller, J. R., Ludington.
 Mills, Carrie, Bailey.
 Mayhew, Ira, Detroit.
 Mosher, Mrs. Nellie, Traverse City.
 Macomber, Hattie, Greenville.
 Manley, Jennella, Grand Rapids.
 Manley, Luella R., Grand Rapids.
 Mulder, Ella, Spring Lake.
 Merrill, Della N., Kalamazoo.
 Moss, W. R., Ypsilanti.
 Martin, Mrs. Minnie, Lowell.

Munson, Nellie, Grand Rapids.
 McLaughlin, O. M., Nashville.
 Mansfield, Mrs. J. R., Hesperion.
 Myers, Mrs. C. D., Gobles.
 McWethy, George W., Traverse City.
 McClure, Maggie, Owosso.
 McDiarmid, Warren, Bowne.
 McDonald, Marion, Shelbyville.
 McGee, G. A., Reading.
 McLaughlin, Jennie, Sturgis.
 McVean, Maggie, Alto.
 Matthews, J. W., Grand Rapids.
 Merrill, G. A., Portage.
 Mekiel, Phenie, Sparta.
 Merriman, Ida, Grandville.
 Merriman, L. H., Rockford.
 Mills, Wiley W., Holland.
 Millsbaugh, Helen, Hastings.
 Moore, Marguerite, Grand Rapids.
 Moss, Carrie, Grand Rapids.
 Moss, M. S., Maple Rapids.
 Nicholson, Alice, Cedar Springs.
 Noyes, Jessie, Grand Rapids.
 Noel, Agnes, Grandville.
 Orr, Clara B., Grand Rapids.
 Orcutt, Georgia, Grand Rapids.
 O'Keefe, Maggie, Dowagiac.
 O'Keefe, J. F., Saginaw.
 O'Leary, J. A., Bangor.
 Orr, Nellie F., Coldwater.
 Owen, Nellie N., Grand Rapids.
 Pinvey, Kate M., Grand Rapids.
 Palmerlee, C. E., Lapeer.
 Perry, Jessie, Orion.
 Perry, Mrs. A. B., Reed City.
 Papeon, George D., Howard City.
 Pebody, Laura J., Whitehall.
 Plowman, J. G., White Pigeon.
 Parkhurst, Lena, Kalamazoo.
 Parkhurst, Nellie, Ovid.
 Perry, Kate, Lowell.
 Poppen, Klass, Zeeland.
 Powell, K. L., Lawton.
 Palmer, Emma, Grand Rapids.
 Parr, W. H., Crystal.
 Patten, Bertha, Grand Rapids.
 Pattengill, H. R., Lansing.
 Perrin, A. B., Reed City.
 Perry, W. S., Ann Arbor.
 Petrie, Jennie, Grand Rapids.
 Petrie, John H., Zeeland.
 Pierce, Abbie, Ypsilanti.
 Pierce, D. C., Decatur.
 Peirce, Eugene F., Ludington.
 Pinvey, Kate M., Grand Rapids.
 Platt, Effie, Reed City.
 Potter, E. A., Vanderbilt.
 Poud, J. V., Grand Rapids.
 Phillipps, J. B., Holt.
 Plunkett, E. M., Ovid.
 Preston, Nina, Ionia.
 Preston, Hattie, Ionia.
 Putnam, Daniel, Ypsilanti.
 Prescott, E. D., Ravenna.
 Quackenbush, E. J., Cedar Springs.
 Rainsborough, Rebecca H., Muskegon.

Ramsdell, Ella, Big Rapids.
 Ranney, Daisy, Lowell.
 Ranney, Mabel, Lowell.
 Randolph, Mrs. W. A., Grand Rapids.
 Ransom, Clara, Grand Rapids.
 Ream, Myrton, Potterville.
 Reed, Abbie, Howard City.
 Reed, Maude, Howard City.
 Reed, Sarah A., Grand Rapids.
 Rice, Emma, Lawrence.
 Richards, Vera, Rockford.
 Richmond, Miss C., Grand Rapids.
 Richmond, Stella, Oakland.
 Roberts, J. W., Paw Paw.
 Roche, Mrs. Mary.
 Rockwood, Francis, Whitehall.
 Rork, Clara, Grand Rapids.
 Russell, E. M., Battle Creek.
 Ryman, Mrs. Elsie, Grand Rapids.
 Sage, W. V., Hartford.
 Sauera, Helen, Grand Rapids.
 Saur, A. H., Kent City.
 Schiller, J. D., Niles.
 Sage, Mrs. W. V., Hartford.
 Sanborn, Jno. H., Clio.
 Satterlee, Ophelia, Kalamazoo.
 Sawyer, Emma, Gladwin.
 Sears, Wesley, Jackson.
 Scott, Kate, Nuncea.
 Sheckell, Cilia, Grand Rapids.
 Sill, J. M. B., Ypsilanti.
 Skinner, J. L., Mount Pleasant.
 Smith, Etta, Frankfort.
 Smith, Clara, Frankfort.
 Smith, Julia A., Schoolcraft.
 Smith, E. E., Chicago, Ill.
 Smith, Mrs. E. E., Chicago, Ill.
 Smith, Miles L., Petersburg.
 Smith, A. H., Grand Rapids.
 Smith, C. E., Schoolcraft.
 Smith, Daisy, Lowell.
 Smith, Elsie, Grand Rapids.
 Smith, Emma, Grand Rapids.
 Smith, Miss E. R., Grand Rapids.
 Smith, F. D., Vermontville.
 Smith, Mrs. F. D., Vermontville.
 Smith, Lora, Grand Rapids.
 Sooy, Mrs. Nettie, Wayland.
 Stark, Stella L., Grand Rapids.
 Stewart, L. H., Niles.
 Stittson, F., Fremont.
 Stoddard, Leora, Palo.
 Stover, Nellie, Three Rivers.
 Sutton, Nellie, Detroit.
 Scott, Chas., Holland.
 Seelye, Helen, Eaton Rapids.
 Shackelton, Cora, Ludington.
 Shaw, Winnie, Lowell.
 Shear, Kittie, Harrisburg.
 Sheridan, Agnes, Perrenton.
 Sheridan, Alice, Perrenton.
 Shutes, Florence, Traverse City.
 Shisler, Clara, Caledonia.

Schurtz, Orr, Charlotte.
 Side, Nettie, Kent City.
 Slauson, H. M., Coldwater.
 Slauson, Mrs. H. M., Coldwater.
 Slayton, Ivy, ———.
 Spencer, Ruth, Austerlitz.
 Stafford, M. E., Zilwaukee.
 Stanton, N., Beaverdam.
 Stuffer, Clara, Gooding.
 Stauffer, Miss R., Gooding.
 Stegink, Benj., Drenthe.
 Stephenson, Mrs. Ella, Grand Rapids.
 Sterling, W. D., Hastings.
 Stevenson, Retta, Ballards.
 Stevenson, Anna, Ballards.
 Stout, Amanda, Grand Rapids.
 Straham, Margaret, Grand Rapids.
 Straight, Eugene, Carson City.
 Streng, Frances, Grand Rapids.
 Streng, Gertrude, Grand Rapids.
 Strong, E. A., Ypsilanti.
 Stroup, F. E., Midland.
 Stroup, Mrs. F. E., Midland.
 Sweeney, I. B., Burr Oak.
 Tate, Rachel, Benton Harbor.
 Thompson, E. C., Saginaw.
 Taylor, A. W., Nunica.
 Taylor, F. M., Albion.
 Taylor, May, Dennison.
 Terrell, Alice, Ludington.
 Taber, Ella, Grand Ledge.
 Thompson, Jas. H., Evart.
 Travis, Jerome, Alma.
 Towers, J. M., Chicago.
 Tuttle, O. G., Elm Hall.
 Thompson, Georgia, Engleesville.
 Trumbull, Myrtie, Lowell.
 Thurston, Lillian, Grand Rapids.
 Vanderwalker, Nina, Ypsilanti.
 Van Valkenburg, Effie, Grand Rapids.
 Wade, C. G., Elm Hall.
 Wagner, J. L., Grand Ledge.
 Ward, Evelyn, Grand Rapids.
 Walkely, Addie, Grand Haven.
 Walsh, Meillie, Bismark.
 Waterbury, H. S., Sparta.
 Wells, F. M., Concord.
 Witherbee, Miss A., Schoolcraft.
 Wheeler, Della, Vermontville.
 Wheelock, Clara, Lyons.
 Whetmer, Jennie, Paw Paw.
 Wickham, F. O., Frankfort.
 Winters, Frances L., Hesperia.
 Wooden, M., Portland.
 Woods, Mrs. E., Le Roy.
 Woodman, Clara, Ann Arbor.
 Wright, Phebe, Mattawan.
 Waldo, Belle, Eaton Rapids.
 Watson, John H., Dutton.
 Wilson, E. A., Tecumseh.
 Winston, R. W., St Johns.
 Witmore, Mrs. M. E., Altona.
 Yntema, D. B., St. Johns.

PAPERS DELIVERED AT THE TEACHERS' ASSOCIATION AT GRAND RAPIDS, MICH., DEC. 22, 1890.

THE MICHIGAN BOY.

BY J. G. PLOWMAN.

The north bound train had halted in the beautiful little city, Albion, Mich., the good byes were said, the greetings were exchanged, and we were moving slowly along toward the capitol city.

"Rather not be in that man's place" said a solid old farmer, as he directed attention towards a dot of humanity climbing up near the top of the stand pipe.

"Some workman," said a commercial man, sitting near him.

"Fraid that man will fall," said a kind old mother.

"It's a boy" ejaculated twenty voices. And sure enough the Michigan boy had "just for the fun of it" hurried to the top of the high tower, and stood swinging his hat at the receding train.

It matters little where we are or what are our needs the omnipresent boy is there, ready for 'business.

"Shine?" Greets us on every hand from the hotel corridor to the "Third house of Congress" while every stroke that polishes the shoes, brightens the wits of the young savant.

"Paper Sir," is our hourly salutation from ten thousand midgets of Michigan's future nobility.

It is the boy who responds to the call of the bell, delivers our goods, carries our mail, runs our errands, and is general roustabout for everybody—the servant of *all*, but the *slave* of none.

In our theaters ready to minister to the comforts and enjoyments of every attendant, or to do the beck and nod of each performer.

At our places of public resort, watching for a chance to serve any one—for a hickle.

In the circus, anxious to lead the horses, ride the elephant, or fan the giant—anything for a ticket.

At the ball games, ready to catch "flies," or to run down the "fouls"—If only the captain will see him.

In our homes from garret to cellar. Are you lovers? The "walls have ears"—but the boy carries them; "the windows have eyes"—set in the roguish face of a boy.

Go on with your sweet secrets; and when you think them known to just you two, the sharp eyes, and sharper ears, and still sharper wits of the boy divine the whole of the "old old story." He hectors, that he may test the loyalty of a friend; he torments, that he may enjoy the strength of a sister's love; he provokes that he may revel in the unbounded fidelity of a

mother's affection—and yet what are our homes without the Michigan boy. Give us his clear ringing laugh and his whistled "Yankee Doodle" and you are welcome to your gets of "Spitz" and cats and poodles.

Do you know that many Michigan women of comparative culture and refinement are unworthily bestowing upon cats and curs the affection due the fatherless and motherless boys of our State?

Do you know that in our State School at Coldwater, there are today one hundred homeless boys, who ought to be in as many boyless homes?

There are just home roofs enough in Michigan to shelter all of her children. There are just husbandmen enough to provide for their needs. There are just mother hearts enough to take them all in. We halt in our way at the church. The boy rings the bell, pumps the organ, builds fires, sweeps, dusts, carries flowers, and is just as necessary to the life of the church, as circulation is to the life of the plant. No boy, no church. A friendly greeting of the boys will do more for the cause of the Master, than the most classical theological composition.

Minister, deacon, elder, common soldier, unbend, be boys again today. No greater work is yours than to save, for the work that is making the world better, the boys of your own congregation and neighborhood.

We believe that the salvation of one bright American boy is worth to the world more than that of many heathen.

Judging of the future from the past, the great thoughts that are to move and benefit the world, lurk in Caucasian skulls.

We must not pass by our own workshop—the schoolhouse. We hear the shouting before we get in sight of the tower. Everybody knows where the schoolhouse is, and when school is in operation, by the racket. The merry laugh, the hearty salutation, the lively games, the general hurrah, the tramp of the boys, the march of the girls, the commands of the teacher, the sweet songs of the morning hour, the reverential hush of the prayer moment, the hum of school business. Oh, dearest of memory's pictures! Bare thy walls of all save these, but let the dim eyes of old age grow bright again at sight of these. Let the aged teacher be young again amid these youthful scenes.

Widen your play ground, enlarge your hearts, sweeten your smiles, put warmth in your greeting. The boy—the Michigan boy is on deck today. The most interesting, the most valuable, the most difficult to understand of all the object lessons of all the ages.

Possibly those who have studied art until they have learned to love the chiseled beautiful forms, can appreciate the true sculptor's feelings as he looks upon his beautiful angel entombed in the rough mass of rugged rock. The inspired artist may see in his ideal the most beautiful form, but its only grace is in its sweet repose. It is silent, sightless, deaf and dumb. But the Michigan boy, our study, has a voice that is heard, eyes that see, ears that hear, a will that wills. He is not an inert piece of rock, nor a plastic mass of modeling clay, but a real live subject. Not a phase of humanity or a line of business or professional life but he imitates.

He preaches, he prays, he teaches, he pleads law, he farms, runs factories, operates great mercantile establishments, he is a clown, a commander of armies, an explorer, an engine, a balloon, a bear, an angel, a necessity, a nuisance, anything that human mind can conceive. And yet, fellow teachers, he is *our study*.

It is as much our business to discover his possibilities and to see that

they are perfectly brought out, as it is the work of the artist to personify his own conceptions in symmetrical forms of solid rock.

Important? The value of an article is known by the demand for it. Have we ever thought what demands our vice institutions are making upon the youth of our State? Who bids for the Michigan boy? Why, let all the boys of this vicinity sign and keep the pledge for twenty years, and your city would be saloonless.

A total abstinence from evil for two decades, upon the part of our young people, and vice in almost every form would be dead.

"Who shall have the Michigan boy—i. e., what principles shall *he* have?" is the most important question of this great commonwealth. Is it not possible that in our eagerness to discover the best methods of teaching, we have overlooked in a measure, the importance of the child? Have we not taught arithmetic too much, and studied the child too little—the *whole* child, his physical and mind self?

We would, if possible, exalt in your minds child life. The teacher ought to be more familiar with the phenomena of child life than he is with any printed book; and yet, how many thousands there are of us who know less about those we teach than we do about the books we teach them.

Oh, how long shall we grope in darkness? How many generations of immortal minds shall be distorted, or their genius defeated, before we shall conceive that "school was made for children, and not children for school;" that the great object in teaching is to help each child to a sound mind in a sound body, with all the noble, natural traits of the mind left *directed* and *inspired*, not *defeated*?

Important? Grand Rapids in one decade shall be a great city, of magnificent architecture, imposing buildings, beautiful streets, huge factories, a city of great wealth and commercial influence. Her citizens shall proudly boast of her beautiful parks and fountains, her art and literature, her libraries and galleries, her churches and schools; but that which shall decorate her with flags and cover her with banners, and raise up the voice of the city in a great shout, shall be the honor she shall show to her favored son "The Michigan Boy" of today—a man without a price, honest and upright; a man thoroughly loyal to every interest of his own State, but equally ambitious for the welfare of our whole country—an American. Why, in that elder day, "to be a Roman was greater than to be a king;" but now to be an American is greater than to be a Roman.

The Michigan girl? Why, she shall be his honored wife! And fellow teachers, they twain shall largely be the work of our hands, a work worthy the highest and holiest ambition, and one which requires for its completion, great skill.

Training for citizenship in a republic is the primary, intermediate, and highest work of a nation's teachers.

A government's constancy is not insured unless its sovereigns—the people—are sound physically, and right morally.

What can the physical condition have to do with the perpetuity of a nation's life and purity? Does not history teach that nations of best physique have been those of most wholesome thought?

Look at our people as they surge through the streets, crowd our courts, or gather in our places of amusement.

How many do we see free from physical deformities?

Turn to our courts of justice, to our great writers and orators, to our faculties of learning,

How many do we find with level heads—men who are right and logical? Is there any relation between the two? "A sound mind in a sound body" should be the motto of our republic's teachers. Will not the teachers of Michigan straighten up, take in a full breath, square their shoulders, level their heads, and introduce in every school in Michigan, at least, a semi-military system of physical culture, and in so doing, place a premium on form and strength? Does it matter to the State whether its citizens are athletic, strong and agile?

Then is it certainly the teacher's mission to teach to these ends.

However great the need of physical training, it is equally urgent that the powers of the mind should be symmetrically developed.

The very nature of a republic requires that its citizens should have a keen and accurate sense of what is right.

This power of the mind, germ like, as a natural gift, like the other powers of the mind, is susceptible of correct training. And on this training depends the nation's justice. This at once exalts conscience above every other power of the mind.

Is its proper training overlooked? Something is wrong, fundamentally wrong. Ample as our prisons and reformatory institutions are they are full; and vice and crime, finding it no longer necessary to skulk under cover of darkness, stalk defiantly through our country, and concentrate in our cities.

There is *little* lack of secular or scientific intelligence. From this point of view, there are both statesmen and philosophers in our prisons, men whose mind culture, save in this one respect, equals the intelligent *free* citizen.

As educators, let us give careful heed to two great primary truths—we cannot legislate wrong out of existence, and pure secular knowledge will not save men from vice.

These must be accomplished by properly training the child's sense of right. If this is true, fellow teachers, it imposes upon us, the greatest work of the century.

It tells us that we are the guardians of the nation's life, in the sense that we are the fashioners of the growing mind.

Disciplining as is the study of mathematics, culturing as is the study of the classics, enriching as is the study of the sciences, still infinitely more vital to the nation's life, is the study of that science which finds its climax in that wise saying, "Righteousness exalteth a nation."

THE INSTITUTE SYSTEMS OF OTHER STATES.

PROFESSOR B. A. HINSDALE, OF THE UNIVERSITY OF MICHIGAN.

The teacher's institute is a distinctive characteristic of the American system of public schools. It originated in the period, so happily named "The Educational Renaissance," that also gave the country the State board of education, the superintendency, State and local, the normal school, the public school library, and educational journalism.

Dr. Henry Barnard, the secretary of the Connecticut board of education,

realized as profoundly as any man of the time the deplorable condition of the public schools, and the deplorable deficiencies of their teachers. Defeated in a strenuous attempt to induce the State legislature to establish a State normal school, he asked himself the question whether anything could be done partially to meet the demand of the hour. The immediate answer to this question was the first institute, held in Hartford in 1839. In order to show, as he said in his circular, "the practicability of making some provision for the better qualification of common school teachers, by giving them an opportunity to revise and extend their knowledge of the studies actually pursued in district schools, and of the best methods of school arrangements, instruction and government under the recitations and lectures of experienced and well-known teachers and educators," Dr. Barnard called together, for a month's session, such teachers of Hartford county as were disposed to attend, organized them into an institute and, with several helpers whom he called to his assistance, proceeded to give them the much-needed instruction. Dr. Barnard apparently thought only of a provisional expedient. He intended to renew the effort to found a normal school; but in the meantime the institute would be a useful device. He builded better than he knew. His example was quickly followed. The first institute in New York, and the first that bore the name, was held in 1843. The first in Ohio in 1845. The first in Michigan in 1846.

At the first the institute was a purely voluntary agency, supported by individual sacrifice; but in time the State took it in charge, and it now has a status in many, perhaps in most State school laws. The National Commissioner of Education reported in 1887, that in the year 1886-7 there were held 2003 institutes, with an enrolled attendance of 138,946 persons.

The commissioner reported the same year that of 276,000 teachers in 28 states, 23,600, or less than nine per cent had attended normal schools. Also that all the normal schools and departments in the country enrolled but 49,500 pupils, and that they sent out but 4,065 graduates. Furthermore, his statistics warrant the statement that not less than 40,000 new teachers were needed that year to take the places of those who retired, and to fill new places created by the extension of public education. It seems clear, therefore, that the normal schools do not furnish, at least of graduates, more than one-tenth of the new teachers that are called for from year to year; and the conclusion is irresistible that all the professional instruction that the vast majority of public school teachers ever receive, outside of teachers' meetings, they receive in the institutes.

It is furthermore manifest that the per cent of teachers who have been educated in normal schools increases but slowly. The per cent of such teachers in the contingent of new teachers in 1887 could not have been much larger than in the whole army.

These facts show conclusively that the institute cannot be dispensed with; that the forces which created it will maintain it; that it is, and for years to come will be, the great means for carrying professional instruction to the teachers of the common schools. Indeed, the State and national reports alike point to an increasing reliance upon it. Surely, we have the most convincing reasons for making the institute the most vigorous and efficient educational agency possible.

Although the institute is now more than fifty years old, it has never been adequately discussed in any book or treatise. Should such a work appear, it would embrace the following features:

1. The history of the origin, development, and result of the institute;
2. A definition of its sphere;
3. An account of its means of financial support;
4. Methods of control and management;
5. Instruction, its character, range, methods, and agents; and
6. Reforms and improvements.

A very hurried and imperfect treatment of three of these topics is all that can be attempted in this paper. A few words will suffice for pecuniary support.

At first the institute was wholly dependent upon voluntary support. For some years the instructors either served gratuitously, or received a meager compensation from the slender fees of the teachers in attendance; such is still the case in some states, as in Missouri. But whenever the state has assumed the control of the institutes, it has made some provision, although by no means always adequate provision, for its maintenance. The principal sources of income in different states are state, county and city or town appropriation, normal school funds, fees paid by applicants for teacher's certificates or licenses, and fees paid by the enrolled attendants upon the institute. In no state, however, do we find all these sources of supply. The New England states generally make some state provision for their institutes. Every Pennsylvania county makes an annual contribution of \$200 to the county institute from the treasury, and every Indiana county a similar one of \$50. Wisconsin and Minnesota draw to some extent upon the normal school funds. Ohio depends upon certificate fees, and so does Michigan, except that the State treasury may be drawn upon each year to the amount of \$1,800. Mention may also be made of the Peabody Institutes of the South, that derive their support, in whole or in part from the Peabody fund.

Modes of controlling or managing institutes vary in different states. They depend somewhat upon the organization of the school machinery of the state, and somewhat upon the character of the institute. We may exclude from our survey town and city institutes, that are naturally conducted by the local authorities, and fix our attention upon state, district and county institutes.

In some states all the institutes, and in some part of them, are managed from the state capital. The state board of education, or the secretary, superintendent or commissioner, or the two together, exercise the power.

In 1885 the National Bureau of Education published a circular of information devoted to the Institute. Although the statistics presented in this circular are now old, they are, so far as I know, the latest of their kind; moreover, they will answer the present purpose, which is the illustration of methods rather than matter of fact exactness.

This circular contains a table of statistics of state and district institutes, embracing twelve States. In Alabama these institutes were held by the state superintendent, in Massachusetts by the secretary and agents of the state board of education; in Arkansas, Florida, Minnesota, Nevada, New York, North Carolina, Rhode Island, South Carolina and West Virginia, by conductors appointed by the state superintendent or commissioner; and in Texas by conductors appointed by the state board. It should be observed that some of these institutes, as in Massachusetts and New York, do not differ in character from the county institutes of other states.

The same circular shows who were the conductors of the county institutes in eighteen states. Alabama, the local school authorities; Pennsylvania,

Indiana, Nebraska, Nevada, North Carolina, the county superintendent; California, the county superintendent and the principal of the normal school; Illinois, the county superintendent and private instructors; Iowa, the county superintendent and school principals; Kansas, persons licensed by the state board; Maryland, the principal of the state normal school and members of its faculty; Michigan and West Virginia, conductors appointed by the state superintendent; New Jersey, under the direction of the state superintendent; Ohio, an executive committee appointed by the teachers of the county; Vermont, the state superintendent; Virginia, county and city superintendents; Wisconsin, state superintendent and normal school board. In nine of these states the county superintendent controls the county institute absolutely, or in conjunction with other school authorities. Of the remaining nine, Maryland, Ohio and Michigan had in 1885 no county superintendent. These facts show a strong, but by no means uniform, tendency, to give the county superintendent partial or full control of the county institute in states having such an officer. Six states that had such superintendents gave them no such power.

For the management of the state and district institutes in the proper sense of those terms, state control is admirably adopted. On this point there can hardly be two opinions.

But touching the management of county institutes, we cannot expect such unanimity of opinion. Much will depend upon the organization of the state educational machinery, upon the size of the state, upon the habits and traditions of the people and of teachers, and particularly upon the agents by whom the instruction is furnished.

Massachusetts can easily be surveyed from the state house; the secretary of the board practically holds his office during good behavior, and the State maintains a staff of trained agents that, under the direction of the board and the secretary, do most of the institute work. The Massachusetts system, so far as an observer at a distance can discover, is perfection itself for Massachusetts. To some extent these remarks also apply to New York; that state also maintains an institute staff. Still the much greater size of the state renders the plan less well adapted to New York.

Control by a state normal school board, as in Wisconsin, and by a normal school principal or faculty, as in Maryland, is a form of state control, and the remarks concerning Massachusetts and New York will largely apply to such cases. This plan is not likely to work as well as the Massachusetts plan, however, unless the State executive school officer is a member of the board.

The Ohio plan, that puts the management in the hands of the teachers of the county, and thus excludes the state commissioner altogether, save in cases where home rule fails, brings the institute near to those most interested in it, often the results are excellent, but not always; for sometimes the local management is ignorant, insufficient, and even dishonest. Still, this is the only plan that is consistent with Ohio ideas. From the very beginning that state has been chary of intrusting power to state executive officers. It is one of the four states in the Union that have never given the governors the veto power.

State control has little to recommend it in large states without a trained institute staff, especially if the superintendent holds his office by a political tenure. As a rule, he cannot have a personal knowledge of localities and of

men adequate to intelligent direction. He is compelled to rely largely upon second-hand information. The teachers feel that the seat of power is at a distance from them, and charges of personal influence and ring management are likely to circulate.

Only the county superintendent plan remains to be considered. This plan is strong where the state plan is weak. Taking everything into the account, this seems the natural and sensible method of control in a state that has established the county superintendency. Still, when there is one, it may be well to associate the county school board with the superintendent.

This branch of the subject may be dismissed with these additional remarks. Every one of the plans may work well when in good hands. No one of these possesses all the excellencies or all the defects. Education more than almost any other work in the world, is a matter of persons rather than of machinery.

The last and the most important of our three topics is instruction. To a considerable extent it has been anticipated, but not wholly so.

Upon the whole, the institutes of the country are taught by a rather miscellaneous body of teachers. In Massachusetts and New York the instruction receives its character from the professional staff; but even in these states, and especially in New York, much of the work is done by others, as superintendents, principals and teachers of schools. In the states where the normal school faculty or faculties constitute an institute staff, a still larger amount of work is commonly done by such hands. In such states as Ohio, Pennsylvania, Indiana and Michigan, the authorities in charge choose such assistants as they can secure. A few of these are retired teachers or educators; but the majority are men and women engaged in teaching, and are drawn from the public schools, the normal schools and the colleges, many of these instructors do work of the highest character. In most of these states, and probably in all of them, there is an excellent non-official institute staff; but it must be confessed that in these states, and in others also no doubt a considerable number of persons secure appointments who have no sufficient recommendations.

Argument is hardly called for to show that a state institute staff or faculty is highly desirable. The advantages of specialization declare themselves here as elsewhere. It cannot be questioned, that, as a rule, such a corps of experts will give unity, consistency, and strength to the institutes throughout the state. And if any object is more to be wished for than this one, it has not declared itself.

At the same time, it may well be questioned whether it would be wise to put all the institutes of a large state, into the hands of a professional staff, and particularly a small one. Such teachers are as likely as others to fall into routine and mechanism. If engaged in such work solely, or in such work supplemented by office duties, they will tend to separation from the practical work of the school. They will know pupils only through teachers. These objections will be overcome in a degree if the members of the staff are employed a part of the time in teaching or in supervision. These reasons show convincingly that the best interests of the institute demand the services of active teachers, drawn immediately from the schools, as well as of professional instructors.

On the other hand, it is of considerable advantage to teachers of ability and ambition to render institute services. They receive as well as give, or receive in giving.

Upon the whole, experience recommends a professional staff or faculty large enough to permit at least one member to attend every institute in the State, supplemented by the best qualified assistance attainable, and especially by teachers from the schools.

Much excellent work is now done in the institutes; but also much that is unsystematic, superficial, and inaccurate. Men who are ignorant, inexperienced, and even coarse are sometimes found where men of cultivation, high ideals, and capable of inspiring the spirit of scholarship are urgently needed. This is the institute problem of the day. It is a pressing problem, I shall not carry its discussion farther, except to add one thought.

Two years ago I suggested, in an article published in *The Ohio Educational Monthly*, what I called "the cycle plan" of organizing institute instruction. It embraced the two ideas of a course of work which should extend over two years, and the appointment of teachers with sole reference to their ability to present particular subjects. Two years was made the limit of the course, because it was not thought practicable to carry it beyond that point. But I had been anticipated. State Superintendent Draper, of New York, had already announced his intention to prepare for that State an institute course, which should be continuous from year to year and year after year for three or four years, thus obviating annual changes. He also gave his sanction to a plan to make the institute four weeks long. How much progress he made in carrying out this bold scheme, I have not learned. It is worthy of close consideration. It is obviously open to the criticism, if criticism it be, that there must be a succession of classes in a scheme so extensive. New York may be ready for it; but Ohio is not and Michigan is not. My conviction is that the two-years' plan is as extended as we are prepared for at present. But while we may doubt the practicability of Mr. Draper's comprehensive scheme, we are all deeply interested in his main idea. We must also approve heartily the words with which I close, "I consider the institute one of the most important helps of our work" he says, "and one which should be brought to the highest degree of perfection and efficiency possible."

OBJECTS OF THE MICHIGAN TEACHER'S INSTITUTE AT THE PRESENT TIME.

SUPT. T. L. EVANS, EATON RAPIDS.

It has been truly said that three kinds of knowledge are necessary to one who would teach well. 1. He should know the nature of the being to be taught. 2. He should clearly understand the knowledge, the facts or the subject matter to be presented to that being. 3. He should know the method of bringing knowledge and being together and the best order of doing the work.

This kind of knowledge that is involved in the last of these three great essentials, I maintain ought to be and I believe is, the objects of the Michigan Teachers' Institute at the present time. The verb to institute signifies to begin, to fix, to appoint, to set in motion, to train, to educate, to disci-

pline and to form by instruction. Then the word institute as applied to teachers' meetings, if used in its correct sense, must signify that which sets in operation at a fixed time in accordance with fixed principles, a planned program of work the subjects to be so related and taught by a thorough educator that the teacher taught may learn how to develop a mind so that its unfolding powers may be quickened and led out methodically in accordance with correct principles of instruction.

By correct principles of instruction I mean that order of teaching by which the mind will be inspired and guided, by which its retentive powers will be quickened by reasoning, by which there will be a harmonious development of all the powers of our being, and finally which aims at the education which confers culture and the completion of man by adjusting all his relations.

Since the year 1846, when the first teachers' institute was held within the borders of Michigan, until the present time, it has been an important factor in the educational progress and history of the State. From that date the teachers' institute in Michigan has continued to grow in numbers and in power until it has ranked for many years as a characteristic and distinctive feature of the educational system of the northwest.

The number of institutes held in the State in 1889 was 72, with an attendance of 6,597 teachers, the expense being \$11,396. The total teaching force of the State within the same period was 16,075 teachers while the actual number necessary to supply the schools of the State was 10,637. Thus we see that about half of the teachers of Michigan attended an institute within the year 1889. These statistics clearly demonstrate that all the preparation for teaching, other than academic instruction that a majority of our common school teachers receive, they receive at the teachers' institute. Thus we see that the teachers' institute is one of the live educational problems of the hour to be wisely and carefully studied by those who direct the educational forces of the State.

Its chief aim should subserve my premise at the outset, viz.: a thorough familiarity on the part of the teacher of knowing "how to bring knowledge and being together" in accordance with modern accepted principles of pedagogy, and in so doing to help a vast army of teachers who have not received and could not otherwise receive suitable instruction in the science and art of teaching.

The institute is of invaluable service also to professionally educated teachers; it gives them new ideas and methods; it fills them with a spirit of zeal and earnestness for their coming work that they might be prepared to gather up and spread before their pupils the choicest gems of art, literature and science, early and truly inspiring them with the love of learning.

In the words of Dr. Hinsdale in the *Ohio Educational Monthly*, "The institute is, and always has been, a confession of the educational weakness and poverty of the country; but also happily, a sign that the situation is understood, and a pledge of progress."

This is emphatically true in Michigan where the yearly increasing attendance at our institutes clearly proves that the best evidence of advance and growth in professional training for teaching is found in the efforts of teachers to meet the demand for broad comprehensive work in training a child's mind. And this is accompanied and characterized by more zeal and sincerity in professional work and as a result it has inaugurated that era

in which the true teacher aims always at the culture of the reason and the harmonious development of personal character.

Our educational methods are yet imperfect because we have scarcely waked up to the importance of mental discipline as a factor of success. The poor results that too often follow long years of schooling, the large number of pupils that drop out from the lower grades, the oft-repeated criticism of the public school system for its lack of practical results, the few that pass therefrom to college, the severe complaint of many distinguished men as to how they were educated, all point to a sorrowful defect in our system of education which has not yet been wholly remedied.

It is the duty of the institute teacher to give birth to, and foster a strong sentiment that will have a tendency to counteract this evil, the remedy for which consists principally in emancipating the pupil from the bondage of the text book by making the teacher the fortunate possessor of a systematic knowledge pertaining to the intelligent wielding of the pupil's powers and of the subjects of their exercise.

There is an unwritten law gaining ground, which is at present pretty thoroughly fortified, that it is not the proper office of the institute instructor to teach teachers academically further than is actually necessary to illustrate principles of teaching. Scholastic information or academic knowledge, acquired for its own sake or for its economic value, when applied to the business of life, does not properly fit its possessor for the duties of teacher.

The great function of the institute is then to teach the teacher in a broad sense the true definition of teaching. This may be accomplished by devoting a portion of the institute to methods of instruction, including first what it is to present subjects and objects of thought to the learner's mind as materials for knowledge and for that development of the faculties which may be produced by their right activities. This may be followed by the history and philosophy of education, the educational values of studies and methods of organization, discipline and character-building.

The difference between teaching based on academic knowledge and teaching resting upon the herein outlined institute work is that in the former it is a game of chance while in the latter it is advancing with a definite purpose, by efficient skill along intelligently chosen lines.

Professional teaching knowledge is based upon specific and generic methods relating to specific activities of the human mind, and it deals with definite relations existing between those activities, in accordance with well established principles of educational science. Hence, institute instruction in method should always be in perfect harmony with the nature of the mind that knows and the nature of the subject to be known. And furthermore it should consist almost exclusively in the discussion of methods as founded on principles rather than with a study of the subjects to be taught. If the studies generally known as common English branches are brought under consideration at all, they should be considered and pursued with direct reference to the methods by which they should be presented to the learner's mind rather than with reference to a knowledge of them as subjects.

As to the presentation of subjects the institute teacher should not be unmindful of the fact that his topics should be constructed and his subjects taught in perfect harmony with the previously mentioned methods given on principles of teaching.

The great function of the teacher in his responsible position is to cause

his pupils to learn and the still greater function of the institute teacher is to cause his pupil-teacher to proceed carefully and cautiously along the best line to secure the best results in the school room.

Causing to learn does not mean having the pupil commit to memory stipulated tasks, nor does it mean what is often conveyed by the word "instructing," because to instruct is to lead the pupil to understand what the teacher presents.

Causing to learn depends upon many important conditions which are foreign to this paper, but the first fundamental principle upon which rests the work is a lofty and sacred regard for the child's individuality. Modern educators are now fully cognizant of Froebel's views in giving so important a place to the child's dignity of person and claiming that education is principally growth and must be characterized by freedom and voluntary action, especially on the part of the child. The child must learn because he wills to learn. And to demonstrate this proposition in its different details is a great problem.

It occurs to me in connection with this selfhood of the pupil that the great difficulty on the part of the modern teacher is inability to produce in the pupil's mind that innate inquisitiveness which is the first index of mental activity. Many parents instead of attempting to answer their children's questions, restrain what seems to them an abnormal curiosity and unnecessary inquisitiveness, until they succeed in deadening their desire to learn. In which condition they are sent to school manifesting so great an indifference that many teachers finally abandon their efforts to arouse the mind to its accustomed activities and aim to satisfy patrons by simply cultivating the memorizing faculties of the pupil which the French philosopher Montaigne says is not to know at all.

Here then is the great realm of work for institute teachers and workers in banishing from our midst this grim curiosity repressing specter, upon whose altar multitudes of innocent victims are yearly sacrificed.

It is no more true that water seeks its level than that children seek after knowledge. Hunger is the divinely appointed precedent of food taking, and curiosity is to the mind what hunger is to the body. It is the divinely implanted force that impels the mental powers and vitalizes all intellectual processes.

The careful teacher will conceal more than he reveals, and while feeding the curiosity of his pupils, he will feed it to intensify their hunger.

There is a growing sentiment in some sections of our State in favor of making the path of learning the path of pleasantness. The successful efforts to accomplish this end have wrought results not of the best character and not consistent with our boasted modern theories of education.

With reference to this Quintilian said "let study be to the child a play."

And John Locke, representing a more conservative view, recommended rather a hardening process for the boy to prepare him for learning life's burdens. Still he would make study attractive by throwing around it whatever of delight is consistent with earnest labor.

But it occurs to me at this point that John Stuart Mill broadly comprehended the educational transition of his day when he penned the following words: "It is no doubt a very laudable effort in modern teaching to render as much as possible of what the young are required to learn, easy and interesting to them. But when this principle is pushed to the length of not requiring them to learn anything but what has been made

easy and interesting, one of the chief objects of education is sacrificed. I rejoice in the decline of the old brutal and tyrannical system of teaching, which, however, did succeed in enforcing habits of application; but the new, as it seems to me, is training up a race of men who will be incapable of doing anything which is disagreeable to them.

His prophetic language relative to the new system as compared with the old proves to me that there is a golden mean between the two systems, but more closely allied to the new, which ought to be studied and utilized by the practical and thoughtful teachers of the age and especially those who are called upon to teach the teaching forces of the State.

Education consists in a great measure in learning obedience, in acquiring the habits of doing even unpleasant and disagreeable things from a sense of duty. Hence education must necessarily involve something of restraint and labor which is irksome to the average pupil.

Let us not at this period be unmindful of the important fact that every effort should be put forth to make the associations of school-life pleasant, by having the discipline kind but firm, the methods of instruction attractive, but correct that the pupil may be led by congenial environments to put forth his best efforts.

Life is a field of work in which it is the duty of every person to be an earnest, honest toiler. Let us educate the rising generation, to meet this demand.

There never was a time when interest in good teaching was greater in our State than now.

To foster this spirit and generate a growing restlessness under unwise and unfruitful methods is a lofty achievement in the line of progress.

How eminently fitting is it that the coming Christmastide should be heralded as a joyous and happy festival for children; because, as Canon Farrar tells us, "anecdotes of infancy, incidents of childhood, indications of future greatness in boyish years are a very rare phenomenon in ancient literature. It is only since the dawn of Christianity that childhood has been encircled with a halo of romance."

To teach the teacher that it is his privilege to work in harmony with the beneficent influences of Christianity in the uplifting and training of childhood is a feature of institute work that might be consistently added in some, if not many sections of Michigan.

General intelligence must keep pace with material prosperity in our State, and as a means to this end the institute should serve its purpose.

Education is a process much more easily described than defined and it remains for me but to say that we need to be filled with an enlightened enthusiasm for our profession, and equipped with clear ideas relative to the magnitude of our responsibilities.

In the words of Dr. White I will add that "universal education is the duty of the hour," and furthermore a momentous issue upon which the destiny of this nation depends. We must depend in a great measure upon the Michigan Teachers' Institute, in this great State, to disseminate methods and principles of education, to make teachers profoundly loyal to their cause and to uplift public sentiment in favor of thoroughly trained and competent teachers.

OBJECTS OF THE MICHIGAN TEACHERS' INSTITUTE AT THE PRESENT TIME.

BY E. F. LAW, YALE.

The teachers' institute has been a factor in the school system of our State for over forty years. During this time it has proved its usefulness, it has demonstrated its right to exist, and it is doubtless destined to continue to live with such modifications as changed conditions necessitate and human wisdom guided by experience suggests.

That teaching is an art which is rapidly developing into a science; that thorough training in the subjects to be taught, are intimate knowledge of the nature of the mind to be developed, and skill in developing the mind are necessary qualifications of a worthy teacher, are propositions that many teachers now recognize as truths. More than this, these ideas are slowly gaining a permanent hold upon the public mind.

The institute is a school for the training of teachers. True, its field is limited and peculiar, but a professional school it should be nevertheless.

Thus it appears that the first object of the institute should be to give professional training. The first element in such training is to imbue teachers with proper ideas regarding the sacredness and importance of their work. To mould the human soul while yet in a plastic state, to stamp it with the ineffaceable seal of intellectual worth, to give to that soul proper aspirations and suitable ambitions, to train that rapidly developing will to choose rightly,—these are the functions of the teacher, and what calling can be higher or more important?

A proper understanding of the real nature of this profession often makes the difference between a poor teacher and a good one. It is believed that institutes properly conducted can be made to create a scholarly and professional spirit, to incite educational enthusiasm and zeal, and to encourage teachers to seek the advantages of normal schools and the higher educational institutions.

An element of professional culture that should form a part of the work of every institute is the study of psychology. This subject, until recently, has been neglected only as the instructor wove in here and there in his work in methods, some fragmentary principle. If teaching is a science, here are the fundamental laws; here is the source of principles on which methods should be based. Only that part of the subject should be presented that pertains directly to the teacher's work. Owing to the limitations under which institutes are placed, the instruction should be elementary and confined to established principles. If skill and common sense are not used in this work no very general benefits are likely to result. The method of study will be new to the great majority of those who receive the instruction, and the most scholarly lectures will be energy wasted unless the learners are led to study their own minds and to think, and are shown how to continue to learn after getting a start by means of the brief instruction here received, and are taught by illustration and example how to apply in their school work the principles of this science. The nature of the mind and the laws that govern its development can be successfully presented by many of our institute instructors if they will but turn their attention in this direction.

One of the purposes of the institute is to give direct instruction in prin-

ciples and methods of teaching. This instruction may be given with mental philosophy, at least the methods should be shown to be rationally based on the principles of that science.

Instruction in school management, government, grading and classifying, in the nature and relative value of the school studies should be given, and something should be done in the direction of illustrating that in the teaching and discipline of a school many occasions arise for the training of the moral nature of the child, and that this can be done effectively without formal instruction.

Historically the institute has done much to arouse public sentiment to the importance of education, nor is its usefulness in this respect at an end. One of the necessary evils of a free school system, a system in which the State assumes to a considerable extent the function of educating her people, is a tendency toward a lack of interest in the schools. Agencies should be at work to counteract this tendency, and the institute has been and should be one of the means of accomplishing this result.

We are not yet prepared to dispense with the public lecture altogether. In many of the newer counties it yet has a distinct function in interesting the people and in building up school sentiment. Oftimes, however, the ten dollars paid for delivering it could be better employed in carrying on the regular work of the institute.

We now come to one of the most important questions connected with this subject: Shall academic instruction be given in the institute? Before answering this question it will be better to consider some other phases of the subject. For what class of teachers is this short-term professional school mainly intended? Certainly not for those who have sought professional instruction in the normal school, or for those who have attained a high degree of scholarship. Such may be benefited, but the main object is to reach the great body of non-professional teachers who have had poor or but moderate advantages in the pursuit of the studies. In other words, to reach those with whom teaching is not a vocation, often a mere make-shift, and to do the best that can be done in the way of preparing these for the work of teaching.

Every county secretary knows that a considerable part of our country school teachers are but little more than school boys and girls who have had but meager advantages, and who have not acquired the scholarly habit, and have neither maturity of mind nor power of application in any great degree. Every institute instructor of much experience knows that lectures on the principles of mental philosophy, or on methods or on school management, are to a great extent, wasted on these students; for they receive but little benefit from a process in which there is but little mental activity on their part, as they are not *made* to think and know, only *permitted* to do so. Yet it is this very class that institutes are designed to help. Surely the problem that confronts institute conductors and instructors is not an easy one.

In the first place if what should be done is done by this class of teachers, the institute terms must be made longer than one week. No plan of class work, recitations on lectures, or of academic instruction can be successfully carried out in this time. The institute must continue in session from three to five weeks to accomplish much along this line. It is poor policy to attempt academic instruction, in a term that continues only for one week; but will not such instruction, given in the proper manner, be of the highest benefit to the class of teachers in question? It will be found that a large part of these per-

sons are bright and desirous of accomplishing something. Some have never had instruction in the common school subjects except in a dry, listless and unmethodic way, and a systematic, comprehensive review, conducted by an enthusiastic, inspiring teacher, will often incite in them a love for the studies never before experienced, and awaken a scholarly zeal that will be permanent.

I do not mean to be understood to advocate a plan of turning the institutes into mere drill schools with the object in view of preparing teachers for examinations. Such a scheme would weaken our school system. The work of many of the so-called summer normal schools has been too much along this line of educational quackery.

Teachers should not attempt in the institute to take academic subjects which they have never before studied. If they have some knowledge of a subject, a skillful instructor can teach them to classify their ideas, can lead them to a better knowledge of the subject as a whole, and of the general relation of its different parts, can clear up obscure points, and can give them by his own methods some ideas regarding how the subject should be taught.

There is no economy of time and money in the one week institute so far as the great body of non-professional teachers is concerned. The educational needs of the present time demand a longer term. The lecture system that must be a prominent feature of the work is pretty much a failure in securing permanent benefits to the class of teachers who should be benefited. These teachers must be made to study, to think, to know. The pouring in process is a failure with them. Time must be had for quizzes, for some form of recitation, and some process of testing. The teachers must have time to assimilate the instruction. The instructors must be given time to determine the misconceptions and weak points in the professional knowledge of the teachers, and opportunity to clear up the obscurities and fortify the weak places. A half understood principle, a half comprehended process is useless to the average teacher.

Can the institutes be made longer under our present statutes? is the pertinent question here. If the county plan is pursued it is evident that they cannot be unless they are made less frequent. To be effective there should be at least one each year. The statute gives the State Superintendent the authority to hold an institute for the benefit of two or more adjoining counties, and to draw the fund for the support of such institute from the fund of each county thus benefited. Is it practicable to hold district institutes under this proviso in the statute, and what advantages would be gained by so doing?

First, The State superintendent would be keeping within the limits of the statute, if he deemed this the most profitable way to expend the fund;

Second, The term could be lengthened to two, three, and in many cases to five weeks, and one institute held each year, by uniting the funds of two counties;

Third, As well as admitting an increase in the length of term, the fund would warrant an increase in the teaching force. This would give an opportunity for the adoption of a simple plan of grading so that systematic progressive work could be carried on from year to year.

One of the weak points of Michigan work has been the lack of any system in the instruction as given from term to term. Perhaps in the work of any year the same topics would be treated in about the same general way as in the previous institute. We have reached a point in school

development when something better than this is demanded. Would not it be practicable to begin by dividing the teachers into two classes? In one division put all those who hold higher certificates than third grade, and such of the third grade teachers as, in the opinion of the county secretary, would be competent to do thorough professional work and profit by it. The academic work done in this grade should be principally in the direction of rapid, comprehensive reviews, and the number of subjects treated in this way in any term should be limited. The course in this grade should be varied from year to year, and in each institute a limited amount of work should be thoroughly done. In the lower grade the would-be teachers, the beginners, those with no fixed scholarly habits and with no great degree of professional development, could be placed. Professional work in this grade could be made elementary. A limited amount of academic work could be done each year and these students could be promoted to the higher grade as soon as their acquirements fitted them to be placed there.

With our present system of county supervision the institute should receive a new impulse. At present the county secretary has no legal connection with this work. Our system is under State management where it properly belongs; but would it not be well to secure an amendment to the existing statute, making it the duty of the secretary to act as instructor in the institute for his own county, without extra compensation, his actual expenses while engaged in this work to be paid from the institute fund? The secretary should attend these institutes in order to learn of the work of his teachers and to encourage them in this work. If he is not fitted to act as an instructor in some capacity, it is doubtful if he is qualified for the office of secretary.

Joining two counties to form a district wherever it is convenient to do so, making the secretary of each county, ex officio, an instructor, providing at least one instructor who can acceptably and forcibly present the principles of mental philosophy, making a division of the teachers into sections, giving a systematic course of instruction from year to year, and lengthening the term as much as would be possible under these conditions; is the adoption of these measures expedient and practicable? I for one cannot see why they are not.

That the teacher makes the school is as true in the institute as in any kind of school work; and any scheme for improving the institute that does not take into consideration the fact that it will fail unless properly taught is a poor one. Whatever the system or plan it cannot be a substitute for a competent conductor, and bright, interesting instructors. One great want in our State is a trained corps of conductors who will take the time and trouble to make a special study of the needs of the common school teachers, who are skillful in adapting the work to these needs in each case, and who have sufficient moral courage to organize and instruct an institute so as to give the greatest good to the members regardless of popularity.

Many institutes have been reported as highly successful when as a matter of fact they gave but little benefit. A glib talker with a good stock of stories, or a dealer in bright generalities, is no more fitted for this work than the prosy drill master or the hobbyist. Teachers are not always earnest in their work, and for this reason earnest instructors are needed. Institutes should be organized more closely and in such a way as to secure a good average in the attendance; and conductors should see that every teacher takes and studies the notes given. Some teachers may show

impatience under necessary restraints, but if tact is used but little trouble need be experienced. The institute should be a model school so far as circumstances will permit.

The nature of the work to be done in the State is such that some degree of flexibility is required in institute instruction. I find that except in a few cases, the enrollment of city teachers for the past few years has been comparatively small, and that the teachers in the village schools have not generally shown their appreciation of this work by a good attendance. St. Clair county has over eighty positions to fill in the city and village schools, and one hundred fifty-two in the country schools. Yet at the institute held last summer in which over two hundred persons were enrolled, but fifteen represented the graded schools, although special efforts were made to have instruction given that would be directly helpful to this class of teachers, and pains were taken to advertise well the character of the work to be done.

It is evident that the proper solution of the professional qualification of teachers for cities lies in the teachers' training school; and the statute should exempt teachers employed in cities providing such schools from paying the institute fee. If the law could be amended so as to provide that cities having a population of say 12,000, and employing thirty-five or more teachers and a superintendent whose time is devoted wholly to the work of supervision, could be allowed to use the fund paid by their teachers, supplemented as they saw fit, for the support of city institutes, providing a professional school of at least one week in duration was held as often as once each year, it would simplify, to some extent, the question of adapting the work of the institute to the needs of the whole body of teachers.

If the institute does not reach down into the country schools in such a way as to permanently invigorate the teaching in them, it is a failure. If past experience proves that the country teachers attend much more regularly than city and village teachers, would not the just principle of the greatest good to the greatest number demand that the work should be of such character as to benefit the majority of those who attend? To the country teacher, isolated, without the advantage of association with fellow workers, with but little aid from a supervising officer, often without much preparation, the institute is everything; to the graded school teacher with all these advantages it is not so important.

Institute attendance should be compulsory except in the case of city teachers in cities having an officer who devotes his whole time to supervision; here it should be optional.

It has never seemed to me to be impracticable to make the work of the institute the basis of a scheme of study that is to be carried on by the teacher throughout the year. Now that we have the reading circle again, why is it not possible to combine in a general way these two agencies for the improvement and professional development of the non-professional teacher? Surely this could be easily done. The institutes could be employed as occasions to test the teachers in the reading circle work of the past year, the instruction, especially the professional part, could be along the line of the reading circle plan, and something could be done to inform the teachers how to pursue properly the work of the next year. Nothing is more evident to any one familiar with the intellectual habits of the common school teachers, than that they need advice and direction regarding what subjects to study and how to pursue them in the most

profitable manner. If one of the main objects of the institute is to inspire a scholarly spirit, why should not another object be to guide and direct the ambition thus incited along the way of permanent self-improvement?

If the institute is to be a more powerful factor in our school system than it has been, if it is to aid in invigorating the educational spirit of the present, its limitations must be recognized. The professional instruction given under the best conditions cannot be made a substitute for the work of the normal school; the academic review can be but a means of refreshing the mind, of furnishing, in a limited way, an example in methods, of lighting up obscure points, and of inculcating a scholarly spirit. With these limitations, however, the institute has an important place to fill in the economy of Michigan school work, and it should be improved as educational necessities demand.

DISCUSSION.

Supt. WESLEY SEARS said:

It is doubtful whether I shall be able to add anything of further interest to the suggestions and recommendations of the papers and discussion which have already been presented. However, at the risk of repetition, I beg to occupy a few minutes of your time in which to express my belief in the past work of the Michigan Institute, and to affirm my faith for its future.

It is well for us to be able to give reasons for the faith that is in us.

I have therefore formulated my opinions in ten points of doctrine—a creed, as it were—which are as follows:

1. I believe in the Michigan Institute.
2. I believe it has accomplished much good.
3. I believe it has come far short of doing all it ought to have done.
4. I believe it may be made a source of much greater usefulness to our teachers.
5. I believe better results could be obtained if the term of the institute were lengthened.
6. I believe the attendance upon the institute of every regularly certificated teacher, with few exceptions should be made compulsory.
7. I believe too much unskilled labor is employed in our institutes.
8. I believe that all institute workers who depend upon their ability to tell a good story for their popularity, and who are not fully abreast of the most advanced thought and in close touch with the teachers of the State, all these should be relegated to the rear.
9. I believe that institute instructors should have special training for their work.
10. I believe the teachers of the State, and all others interested in good schools, have the right to press upon us the question: "Does the institute pay?" and, moreover, they have a right to receive a positive affirmative answer.

Much here suggested has been thoroughly discussed by those who have preceded me.

I am glad to have this opportunity to testify to the value I have received as a learner in the Michigan Institute.

As a pupil, therefore, I know whereof I speak when I say they have been of large service to me.

My opinion is fixed that to the teacher really desirous of getting "points" in his profession, the Michigan Institute affords him most excellent opportunities.

But the institute is not doing all for the teacher which we have a right to expect.

As already stated, the length of the institute should be increased. Whenever possible make it at least two weeks long.

Make the institute so valuable to teachers that a law compelling them to attend would not be necessary, though I am in favor of such a law. Exceptions should be made in certain cases to this compulsory attendance, for example:

1. Those having been regularly in attendance upon the institute for a term of six or eight years.
2. Graded school teachers upon the recommendation of the superintendent or board of education.

But the yearly sessions of our institutes should be occasions of rare enjoyment and profit to all teachers.

One point I would especially urge: The *training* of institute workers.

This is an age of skilled labor. Merchants and manufacturers, professional and business men everywhere recognize this truth. Special aptitude and training are needed in the first-class institute instructor.

A review of the reports of the Superintendent of Public Instruction for the past several years will show the number of institute workers to be from 100 to 125.

Now I affirm without fear of successful contradiction that there are not 100 trained institute instructors in our State, and I will affirm as confidently also that there are not one-half that number.

It does not follow because a man is able to fill acceptably a chair in college or normal school, nor because he is a successful city superintendent, nor because he is a thorough-going secretary of a board of school examiners, that *therefore* he must be a good institute worker.

Give us instructors that have made the institute problem a special study, that are alive to the demands of teachers, that study the educational problems of the day, that have tact in conducting the practical work of the institute, and we shall have an institute that will accomplish far better results than at present.

From the report on institute work for 1889 in the State of Wisconsin, I ascertain that in that year to do the work of 80 weeks of institutes there were employed five conductors and 14 assistants.

Under our law such a reduction in number of institute workers would be impossible, but if the number could be largely decreased, and the quality correspondingly increased the results would be far more satisfactory.

At present the Michigan Institute costs from \$10,000 to \$12,000 annually.

"Does the institute pay?" is a pertinent inquiry. Teachers who contribute this fund have the right to demand the very best service for this money.

By lengthening the term of the institutes, by placing them in charge of trained workers, by compulsory attendance, and by harmony of effort between the State educational department, county boards and institute workers, I believe the highest good may be accomplished.

Supt. W. W. CHALMERS said:

MR. PRESIDENT, FELLOW TEACHERS—It is my desire—also the desire of the board of education and citizens of Grand Rapids to make your stay here as pleasant as possible. The cordiality of your welcome here is without a modification.

A great teacher once said that institutions and men must be judged by their works. The institute must be thus judged, and I am proud to say that I think it can stand the test whenever it may be applied. Compare the district schools of ten or fifteen years ago with those of today. I have seen pupils in school for three or four years, reading in the fourth reader—although they ought to be in the second—and not know how to write their own names. I have seen the district school teacher draw up his arm chair, collect his A, B, C, class about him and give them their allotted 10 to 20 minutes in teaching them to say *doubleyou* where they saw a certain character. I have seen pupils in the district school solving long "sums" on their slates, working lengthy problems in addition, before they ever hear of such a thing as subtraction.

All this and much more I could call to mind at the present time goes to show that the common school teachers of Michigan of a few years ago, although mentally strong, were ignorant of the subject of methods. Now all this is changed. Enter these same schools and you will see little children of the second and third readers writing and punctuating letters. Just think of it, fellow teachers, in these same schools where a few years ago the punctuation point never entered, except in the text-books, you may see today if you will, little children writing and punctuating letters. They are taught in arithmetic by the Grube method. Thus mathematics is being symmetrically developed. The three years' course in the alphabet has been abolished and in its stead you will find a list of words on the black-board that the beginners have learned.

What has brought all this about? I think it has been brought about in four ways. First, county supervision; second, educational books; the rich educational journalism of the present; fourth, institutes. But I believe the pioneers in these dark fields of professional ignorance were the institute instructors. In their tracks you will find educational works and papers.

Now, since the institute can do such work as this, the only question is how to elevate it. My answer is: First, grade the work. I think the work should be graded in at least two classes. The work in the advanced class should cover, (1) history, and principles of pedagogy, (2) psychology, its analysis and application to teaching, (3) aids in teaching, such as the construction and use of apparatus; reading, number, and language charts; relief and moulding maps; the collection, classification and preservation of botanical and zoological specimens. The work in the beginners' class should be (1) academic work, (2) the

presentation of the common branches to a class. Second, the good resulting from any institute is in exact proportion to the ability of the instructors. Hence, who shall teach in county institutes is a very important question. I believe that institutes should be instructed by, (1) the very best teachers in the State, and (2) county secretaries. I believe county secretaries should be connected with institutes for the following reasons: First, to secure the enrollment and attendance of the teachers; second, to classify understandingly and with authority; and third, so that he may become better acquainted with his teachers.

Supt. E. L. BROOKS said:

MR. PRESIDENT AND FELLOW TEACHERS—I do not like this term “skilled labor” as used here today. If we mean by that, certain men of supposed rank in the field of education, who, because of this standing are sent by the department of education to different parts of the State to hold institutes, and deal out to the teachers the same kind of instruction irrespective of locality, I am opposed to the plan.

What is wanted and the only thing that can be done in the short time allotted to institute work is instruction given that shall comprehend the needs of the locality, and advice that shall be of practical benefit to the teachers. But no, the plan has been to allow certain educators of supposed qualifications to fill their satchels with documentary matter and betake themselves across the State to some locality they know nothing of, there to put in a week of their school vacation at the expense of the teachers. Many times the appointed instructors do not reach the place arranged for the holding of the institute until Monday noon and often they leave at Friday noon. Is it any wonder that the teachers think they pay too large a price for so small a whistle? As a result the teachers have come to look upon the institute as of but little importance to them. As has been said by a former speaker, I do not wish to complain, but there is too much of a disregard of the needs of the teachers in institute work. There is much difference in the demands of counties. Some counties have large district schools of forty and fifty pupils but there are counties in the State whose schools do not average an attendance of more than ten or twelve. In some counties there is a sentiment of a high order that has required years to form; and which has been brought about by two or three live educators who have been unsparing in their efforts and by means of their energy and zeal have raised the standard of the teachers far above that of their neighboring counties; there are other counties where the standard is exceedingly low, with but little interest in educational matters. Shall the same kind of instruction be given in the one as is given in the other? This has been the plan in the past. Much of the instruction given has passed entirely over the heads of the teachers, has been poured out in the prescribed manner, stupifying and befogging the minds and causing them to become dissatisfied with the plan.

What shall be the qualifications necessary to be classed as “skilled labor”? Shall they consist of a diploma from the State University or the State Normal with all the ruts the holder is liable to fall into in after life? Too often the only qualifications consist of the fact that the instructor is a pet of the department.

The money for the support of the institutes is raised in the county, by the teachers of the county, and should be allowed to be expended by them, for their advancement, in such a way as a majority may desire. I favor the Ohio plan of managing institutes.

Supt. J. R. MILLER said:

MR. PRESIDENT AND FELLOW TEACHERS—All agree that this is an important question. Many instructors in aiming to give instruction above the majority of teachers, have placed it so far above as to not only discourage and disgust the great majority, but it has had much to do in bringing the institutes into disrepute.

During the past week it has been my pleasure to work in an institute with one of Michigan's best secretaries.

After observing how thoroughly he understood the needs of the country schools and how well his study and observation had fitted him to help these teachers, I was thoroughly convinced that the efficiency of the institutes would be materially increased if each secretary should have a voice in determining who should conduct the institute and who aid as instructor whenever deemed qualified by the State Superintendent. My experience as an institute worker convinces me that it is well nigh impossible to have a real successful institute unless the secretary gives it his sympathy and support.

It has been claimed that many of the secretaries are not competent. Is not one of the best ways to make them competent, to hold them responsible for the normal training of their teachers? It would be much better if the institute could be divided into two grades and the instruction given according to the needs and attainments of each.

Prof. D. PUTNAM:

I would like to say just a word upon one element of value in the county insti-

tutes which has been incidentally alluded to, but has not been emphasized so much as its importance deserves. I refer to the power of an instructor to create enthusiasm in the minds of young teachers, to send them home from the institute with an earnest purpose, a burning zeal for self improvement, and for improvement in methods of teaching and management. The best work of an institute is often in this very direction. A man who is neither very learned, nor a very excellent teacher, may, by possessing this power of arousing and exciting this passion for excellence, be of more value in the work than another man who is far his superior in ability and scholarship. Pestalozzi, the great educational reformer, possessed little skill in practical teaching; he failed oftentimes to apply correctly his own principles; he was utterly unable to manage a school successfully. But he had power to kindle a fire of genuine enthusiasm in the souls of those who gathered about him. He sent them out to do what he could not do himself. Such a man has a place, and an important place, in our institute work. I am sure we can all of us recall some teacher or speaker who has done for us just this thing, has given us almost a new spirit, has created for us a new ideal, and has given us an impulse which has never lost its force. The man who can do this for young teachers will always be needed in the institute as well as in the school-room.

Supt. F. O. WICKHAM:

I heartily indorse that sentiment of the paper-recommending that county secretaries be in some manner connected with the management of the institute. There is no one who should be so well posted on the needs of the teachers in a county as the County Secretary. I have no doubt that there are some secretaries who know but little of the needs of their teachers; and if they did would not be able to render much valuable assistance in an institute. This I believe to be no vital objection to the principle. The very fact that the secretary was to render such assistance would tend to urge upon him a better preparation for his work; or perhaps, better yet, cause him to drop out and make room for a good man. In any event, I believe more interest might be awakened in the teachers of a county if such a course were adopted. Any person elected to the office of secretary *must* have his influence; and it is certainly more desirable that that influence be exerted for the institute than against it. It was my good fortune, during the past summer, to act as instructor in an institute held in a county blessed with a live secretary, who had left no stone unturned to arouse an interest in the teachers of his county to the value of the institute. Notwithstanding the fact that the institute followed closely upon a so-called Summer Normal, our actual enrollment included more teachers than it took to supply the schools of the county. The secretary informed me that only five active teachers of the county were absent.

PREPARATION IN HISTORY FOR COLLEGE WORK.

PROF. RICHARD HUDSON, UNIVERSITY OF MICHIGAN.

The opinion is gaining ground that the schools of the State, especially those with a small teaching force, would do better work if they did not attempt to teach so many subjects, and that the interests of scholarship would be promoted by sacrificing something of the variety now to be found in high school courses and in university requirements. How this variety came to be introduced it is easy to see. Every new teacher has his favorite study which he tries to introduce into the curriculum if it has not already a place there. Members of the school board and patrons of the school have their preferences which must be taken into consideration. Members of the University faculty naturally do what they can to foster the interest in their own lines of work. The University has established a number of courses and in some of these courses has made alternative requirements for admission in order to keep in touch, as far as possible, with the high schools of the State. This it has done at no slight inconvenience to itself, for when of a number of students taking up a subject in

the University some have done nothing with it, while others have studied it in high schools, but with different degrees of thoroughness, the problem presented is sometimes perplexing.

In any movement toward the simplification of courses, the high schools must take the lead, for they have a life of their own and in mapping out their work they must keep in view the interest of the great body of their students whose education is completed within their walls. But there can be no conflict between the interests of the schools and of the University, for, as a rule, it will be found that the subjects in which the University gives no elementary instruction will be the very subjects which the schools will teach in the interest of the great body of their students. But there is no reason why the schools should prepare for every line of study offered in the University. What the University needs is not so much preparation for special lines of work as that mental training and discipline which fit students for the advanced work which it undertakes.

These remarks have been made to prepare the way for the inquiry, whether the entrance requirements in history could not be simplified with advantage both to the University and the schools. Some knowledge of American history is required for all the courses. But in all except the English course the requirement is limited to the colonial period. Among the changes recently made with a view of strengthening the latter course was an increase in the quantity and quality of the preparation in American history. A knowledge of the whole of the history of the United States is now required and the attention of the schools has been called to Johnson's History of the United States in order to indicate the grade or character of work that is expected. Work of this character can be done only in the latter part of the high school course; certainly not in the grammar school where the teaching of history must be in the main biographical.

In increasing the requirement in American history in but one of the courses, the University has stopped short of what the schools ought to do in their own interest. Can any one doubt that thorough instruction in the history of our own country ought to be introduced into all high school courses. Argument upon this subject might seem superfluous were it not that there are many schools in the State in which American history is taught only in the grammar school. Those who are responsible for this neglect of historical study have surely failed to appreciate the pedagogical importance of historical training. There is such a thing as historical knowledge. History, as truly as mathematics and the sciences, is the domain not of caprice but of law, only that in the latter case it is more difficult to bring acts under their proper category and to discover the motives by which they are determined. While those who are versed in such things can tell in advance how much pressure the timber or iron of a bridge is capable of resisting, we cannot predict with any certainty the conduct of individuals or of nations. Human spontaneity cannot be reduced to an equation. Individual conduct cannot be foretold without a most complete acquaintance both with the individual and his environment. Self evident as this fact is, most of us are very slow in learning it. Like the revolutionary legislators of France we try to force men into our category instead of looking at the actual man as history and his surroundings have fashioned him. We are uncharitable and censorious because we apply to others the narrow and conventional standard furnished by our own experience. The study of history gives breadth of view and teaches

men to judge the conduct of others by a more generous standard than that of their own prejudices.

More attention would no doubt be paid to historical study if its ethical value were more fully understood. History, like literature, brings us into contact with life. We fall into a most serious mistake when we imagine that education has no bearing upon conduct. The school ought to do more for its pupils than to sharpen their intellects. The characters that people the pages of fiction and of history are of the same flesh and blood as ourselves, and in delineating their motives and conduct we are holding a mirror up to our own faces. When boys and girls are forming their ideals why shut them up with people of their own neighborhood instead of bringing them into contact with the great characters of history and of fiction. Moreover, if history is deserving of study, the history of our own country should take the first place. Enlightened patriotism must be based upon an intelligent appreciation of our country's history and institutions. The State and the nation have a right to demand of the schools that they shall prepare citizens for an intelligent discharge of their public duties. A few of the schools of the State have already provided for thorough instruction in American history in all the courses and it is to be hoped that this example will soon be universally followed. When the schools shall have taken this step in their own interest, then the University can make the requirement in American history uniform in all the courses. This is all the more necessary because the work done in the University in this line presupposes considerable acquaintance with the subject and because all students taking up the work there should have the same degree of preparation.

It will scarcely be necessary to show that while particular attention ought to be paid to our history the general field ought not to be neglected. A strong course in general history ought to be provided in every high school. Our own history can be understood only as part of a more general movement. Indeed we are students of history only in so far as we study events and movements in their relation to antecedent and subsequent events. Moreover, the larger our horizon, the more generous and broad will be our sympathies. Now that the world is becoming a neighborhood there is all the less reason why the attention of the student should be limited to his own country. If choice must be made between general history and the history of England it seems clear that the former ought to be preferred. While the history of England, of which our own is in a sense the continuation, has for that reason particular interest for us, yet every boy and girl ought to gain some knowledge of the earlier civilizations in the valleys of the Nile, the Tigris and the Euphrates, of the history of Greece and of Rome, of mediæval Europe, of the Revival of Learning, of the Reformation, and of the struggles out of which have emerged civil and religious liberty.

General history is now an entrance requirement for the English and scientific courses. The courses for which it is not required are the classical and the Latin. But for the former Grecian and Roman history are required and for the latter Roman history. This suggests the inquiry whether it would not be in the interest both of the University and of the schools to secure uniformity by putting general history into all the courses. The professors of Greek and of Latin have been consulted and have given their consent to the substitution. It might be unwise however for the University to take the initiative as this change might involve a slight increase in the requirements for admission, especially in the Latin course.

If the schools however take the matter in hand and put general history into all the courses, the University will gladly arrange its requirements accordingly. Some of the stronger schools in the State have already set the example.

There remains to be considered the requirement in English history which affects only the English course. Until recently the requirement was the first five chapters of Green's Short History or the whole of such a book as Lancaster's History of England. Since the increase in the entrance requirements for the English course, however, such a knowledge of the whole of the history of England as can be obtained from the use of Ransome's Political History of England is required. It is greatly desired that all who shape the policy of the schools and all who teach English history should understand why the requirement has taken this form. Instruction in English history adapted to the needs of those who have made no study of the subject, is necessarily given in the University. Hitherto students who have had English history in the high schools have gone into classes along with those who were taking up the study for the first time. Nor could this be otherwise as long as the work done in the schools was of such an elementary character. It is evident that the work done in the high schools can be accepted as the basis for advanced work only on the condition that it shall be substantially equivalent to the work done in the elementary course in English history in the University. Sufficient time has not yet elapsed to warrant an opinion whether the schools are likely to do work of this character. The difficulty in the way of changing text-books and of rearranging courses so as to give this work a more advanced character is fully understood. So far certainly many of the schools have not come up to the new standard. Nor indeed can they do it unless they have as well equipped teachers of history as of the languages and of mathematics, which unfortunately is seldom the case. Superintendents of schools are urged to take this question into careful consideration. If for any reason they are not able to provide for work of the character here indicated, then the alternative requirement should be chosen, according to which two years of Latin, French or German may be offered instead of English history and the three optional sciences. Two years of linguistic training would probably be a better preparation for University work than the alternative line of study. Far from opposing the adoption by the schools of the alternative of two years linguistic study, the historical department would gladly make United States history and general history the uniform requirement in all the courses. If the work in English history were not up to the required standard, it would have to be done over again or the student would be hampered in his advanced work by inadequate preparation. The suggestion is thrown out that perhaps the knowledge of English history which is furnished by the somewhat elementary courses given in many high schools and which is necessary as a preparation for the study of English literature, might be secured by emphasizing those chapters in general history which deal with the history of England. Of course this paper deals with work in the high schools only in so far as it is connected with University requirements. There are some schools which have introduced two years' work in languages into the English course but which still retain an elementary course in English history, without, however, offering it as a fulfillment of the requirement for admission.

A word may perhaps appropriately be said in this connection in regard

to the mention of particular text-books in connection with the requirements for admission. This has not been done with a view of prescribing to the schools the use of any particular book, but rather to indicate the standard of work required. Where it can be done, two or three books are named, as is the case in general history; but this is not designed to prevent the use of books not on the list as long as the standard of work is maintained. In some cases, however, a book is so exceptionally good that no other can be mentioned beside it without lowering the standard. But even here it is the grade of work which the University prescribes and not the book. Johnston's History of the United States, which is used in many of the schools, is a book of this character. A somewhat more popular book, supplemented by a thorough teacher, may yield as good results, but the work of a class is seldom of a higher grade than the text-book employed. For a somewhat similar reason the only book mentioned in connection with the requirement in English history is the one used in the University. Not that Ransome's History of England comes as near to the ideal text-book as Johnston's History of the United States. But the books that have hitherto been in use are, as a rule, of a decidedly more popular character, and, while good in themselves, represent a grade of work which can not be accepted in the University as a preparation for advanced historical study. For, as has already been pointed out, the increased requirement in English history contemplates that students who have had English history in the high schools and students who have taken the elementary course in the University shall be in substantially the same position. On the other hand, Gardiner's Students' History of England, the first part of which has just appeared, and which promises to supplant other books of its kind, is likely to prove somewhat too advanced for a school text-book, although as a guide to the teacher and a book to which he may send his pupils for ampler information than the text-book contains it will be invaluable. It is to be accompanied by a volume of historical maps.

It has been said that the University does not prescribe text-books. That would be to attach too much importance to a book. Books are valuable only for the facts and ideas which they contain. There is not so much danger of our making a slavish use of books treating of scientific subjects, for many of the facts which they explain come under our own observation. The book evidently only serves the purpose of bringing us face to face with nature. Why then should even elementary and popular books on history be regarded with so great reverence that children are expected to repeat them as Mohammedan children repeat passages from the Koran. Is it not the lack of historical imagination that makes us slaves to a book? Books, even the best of them are not so much objects of study as helps to study. What we are to study is not the historians but the actions and events which they interpret. To be sure the historians must always be our guides. We study the downfall of Rome in Gibbon and the fortunes of the Netherlands in Motley. But Gibbon, Macaulay, Motley and Ranke will be of little service to us unless we catch their spirit and follow their method. We derive the greatest profit from their writings only on condition that we do, in our humble way, work of the same kind that they have done. The chief reason why our historical teaching is so ineffective is that we are satisfied to take our historical information at second hand. Is it surprising that what others tell us should make less impression upon us than what we see for ourselves?

Moreover, the impression that we make on our scholars will depend on

the impression that has been made upon us. Information must have been assimilated and vitalized by the teacher before he can impart it to his pupils. What we give to our classes is not a certain amount of information that stands in little or no relation to our own intelligence, but rather facts which were instinct with life decades or centuries ago and which we have caused to live again. But events gain reality for us only when seen from near at hand. We catch the color and spirit of the past only when we go to the original records. Books are valuable in proportion as they bring us near to the original sources and throw light on their interpretation. The work of every student in history is the same in kind as that of Ranke, only humbler in degree. All alike deal with the records and with the facts which they relate. By putting these facts into position and grasping them in their relations, we reconstruct the past and bring departed centuries back to life. No one, then, can fairly be regarded as a student of history who does not get information at first hand. By this, of course, is not meant that all our historical information must be obtained in that way, for that would condemn us all to ignorance. Even the best known historians are authorities only for the limited period which they have made their own. But their mastery of the historical method gives them an advantage outside of their own field and puts them in a position to use with facility and accuracy the labors of others. We ought to do at least enough of this kind of work to give freshness and force to our teaching.

Work of this sort is not as difficult as many imagine. Much has been done in recent years in the way of facilitating access to original sources. To show what can be in this line mention may be made of a book which has recently appeared in Germany under the title of "*Quellenbuch zur Geschichte der Neuzeit*," prepared by Dr. Schilling, a teacher of history in a German gymnasium. The book contains, as its title indicates, a collection of original material for the period between 1517 and 1871. The documents are for the most part German, but there are a few in Latin and in French of which, however, a translation into German is given in a supplement. To get an idea of the contents of the book we may turn to the part dealing with the Reformation. Among the documents here given is Luther's account, taken from his works, of the declarations made by Tetzel while selling indulgences in the neighborhood of Wittenberg. Next come nineteen of the more important of the ninety-five theses posted by Luther. No account given of the theses could make such an impression on teacher and students as the theses themselves. These are followed by quotations from the famous discussion held at Leipzig between Luther and Eck. In connection with the Diet of Worms, the address of the papal envoy is given, as also Luther's speech before the Diet, and then the final decree of the Diet against Luther. Further on are given the protest handed in by the reformers at the second Diet of Spire and which gained for them the name of Protestants; a contemporary account of the battle of Mühlberg published in the year of the battle, 1547; the manifesto of Maurice of Saxony and other German princes justifying their alliance with France and their attack upon the Emperor in 1552; and the terms of the Religious Peace of Augsburg in 1555. A book of this kind, giving the most important material for our own history would be an invaluable aid to teachers.

Of particular interest, as bearing on this subject, is the work that has been done in Boston by the director of the Old South Studies. Courses

of historical lectures have been given annually for several years past at the Old South Meeting House, and small pamphlets, known as "Old South Leaflets," have been published by the directors for use in connection with the lectures. The series for the course given this year, includes among others, "Eliot's Brief Narrative of the Progress of the Gospel among the Indians of New England," published in 1671, and "The Beginning of King Philip's War," taken from the "Narrative of the Troubles with the Indians of New England," written by William Hubbard, minister of Ipswich, and published in 1677. These leaflets have proved so serviceable in the limited field that the directors are now publishing a general series of them through Heath & Co. The nineteen numbers already on the market include: The Constitution of the United States, the Articles of Confederation, the Declaration of Independence, Washington's Farewell Address, Magna Charta, Charter of Massachusetts Bay Co., 1629, Franklin's Plan of Union, 1754, the Federalist, Nos. 1 and 2, the Ordinance of 1787 and the Federal Constitution of the Swiss Confederation.

Publications of this kind are a gratifying sign of progress, for while they increase the teacher's facilities, they also emphasize the necessity of special preparation and training for historical teaching. It is so easy to gain a superficial knowledge of history that the opinion has largely prevailed that for teaching history intelligence is a sufficient qualification. And yet no school board would think of employing a teacher of languages or of the sciences who had not made a special study of those branches. Is it to be wondered at that a teacher whose knowledge does not go beyond the text-book should do nothing more than listen to recitations? The remedy is not to throw out the text-book and to substitute a dozen books for one, for in that case the result is too often to turn students into the library without any knowledge of what they are to do or of how they are to do it. The monotony which we lament will disappear when we who teach history shall have become in the true sense of the word students of history and when the text book shall no longer be the means of instructing both teachers and scholars, but rather a convenient summary which the teacher shall supplement and enforce out of his own knowledge. But meanwhile school boards must be brought to see that the ideal teacher of history can not be had for four hundred dollars a year.

DISCUSSION.

PROF. WEBSTER COOK said:

When we are asked to discuss the thesis of the preparatory course in history, there is one implication that at once demands attention. The first impression is that the preparatory is a preparation for some other course, and that other is in the college, and the only reason for such a discussion is the desire or necessity of bringing the two courses in proper relation, to give them continuity, to adjust them so as to make the lower really preparatory for the higher, and the latter a continuation of the former, to make them, in fact, one course with properly adjusted parts. Now evidently this result can be reached in three ways. 1. The so-called preparatory school may determine upon the amount and character of the historical work it will do, and the college may adjust its work accordingly. In this case the lower school would be the determining factor. Or 2, The relations may be reversed. The college may fix upon the character of its own work and force the preparatory school to its requirements. Here is evidently a chance for conflict. If there were any schools in Michigan which had the distinctive rôle of preparatory schools the second of these two courses could be followed; but high schools are not primarily preparatory schools and the preparation of students for college is really a very subordinate part of their functions. They prepare

but one student for the University where they prepare a number for other walks of life, and this latter is really the chief part of their duties. Hence in their purpose they have just as distinct an existence as the University has, and in their establishment they are legally independent, and have the same inherent right to determine the character and extent of the work they will do. In Michigan neither the colleges nor the high schools have any claim to determining what the work in any line of study shall be in both. Looking at the matter in this way then, if there is to be an adjustment of work in the two classes of schools in any line of study, it must be as the result of conflict, or else by mutual concession and agreement. In the former case the high schools must in the end win because they are in closer touch with the people, and the colleges or University would constantly be the greater sufferer. Practically there has been no serious contest. The University has usually assumed its right of determining the whole question of courses, but has been careful to shape its requirements so as not to provoke open contest with its most important feeders. So in fact, whatever have been the appearances, adjustments have been effected by mutual concessions. The University has not always got what it would like, and the high schools often modify, and even extend their work as they otherwise would not.

While this method of adjustment has, on the whole, worked as smoothly as could have been expected, and with only occasional and slight irritation, in certain respects the results have not been satisfactory. At times there has been duplication of work. High school graduates have not received full credit for the work they have already done, and so have been obliged to repeat some of it in the University. This is not so very serious, but a much more serious difficulty has been that many courses have had no real continuity in the two classes of schools, and this I believe has been very largely true of history. The requirements for history as an entrance study have been only of scattered and distinct portions. Some of these, as Roman and Grecian, have been asked for as supplementary to other studies, and not for their own sakes. There has been no idea of grading and little thought of one continuous course of historical study which should embrace the whole school life of the student. Compare history in this respect with the languages, especially the classics, or with mathematics or even with the sciences, and the difference is striking. For mathematics we have a practically continuous well graded course, beginning almost at the beginning of public school work and extending well up into college, or for the special student, into university work proper. Of Latin and Greek the same thing is true, although the course covers a fewer number of years. The sciences are not so well graded and the adjustments between the preparatory and college work are not yet perfect. But even here there is some plan and purpose to the course, which rules with some degree of definiteness throughout. But history in the proper development of its course lags behind all these, and is even behind the study of the English language and literature which is only beginning to receive its proper degree of attention.

That history should thus fall behind is perhaps on the whole not strange. The classics and mathematics have long been recognized as the established branches of study. Against these all the others have had to contend for recognition. Modern science has not advanced more rapidly than has the development of history, but its results have been more striking, its advocates more noisy, and it has attracted more of popular attention. So in education it has won its way to the front more rapidly. Although history has much greater educational value than science, and should really be one of the fundamental branches of all education, yet even educators have been slow to recognize this fact and so give history due appreciation. But another trouble with history has been that less than any other study does it contain within itself the elements of gradation. It can be graded and properly adapted to the varying ages and requirements of the pupils, but this must be done according to pedagogic principles and not according to anything in its own nature. It contrasts sharply in this respect with mathematics whose very nature seems to indicate how and when they should be taught and contrasts more or less with about every other branch of study. So history needs to be adapted and graded, according to the principles of education; and these principles, as we know, have been very hazy in the past, and not many of them are very clearly comprehended at present.

Now those who have of the higher instruction in history, of the real college or university course will, I think, bear me out in this statement; in order that these higher courses may be what they ought, and may accomplish the results that they ought, there is absolute necessity that a certain amount and a certain kind of historical work should be done in the schools below; that this lower work should be not simply different in amount, but it should be different in kind from the higher work; that it is really just as impossible to make the higher courses in history what they ought to be, to get from them the proper results, unless the student has already done the preliminary work, and

done it in the proper manner, as it would be in science or language under similar conditions. But this only leads us back to what has already been stated. The historical course should be graded, and the work should vary in kind at the different stages.

The importance or bearing of this fact has not been fully enough appreciated by teachers either in the college or preparatory schools. History has seemed like history, whether in the grammar schools, in the high schools or in the colleges; the difference in the work at the various periods of the course has seemed to consist rather in the amount and the number of details the course should include, than in the character of the course itself or methods of instruction. In brief, teachers have lacked a proper comprehension of history and so have mixed its educational bearing, and the University requirements have not in any way tended to dispel the illusion. But as educators we should look at history from its educative value, and this implies that both its nature as a science should be comprehended and its distinctive functions as a factor in education, its distinctive bearing on the progress of the pupil.

Even the crudest teacher can see that it requires a certain amount and kind of intellectual advancement for the proper comprehension of history. But few teachers have seemed to realize that it is capable of the completest gradation covering almost all periods of student life. History in the full sense of the word, is a very broad subject; it embraces the whole progress of the race in its long course of development, and covers every side of human nature. So in some of its many aspects or places there can always be found what is fitting for the child at every stage of his growth, and what will in some way contribute to further and complete that growth. History then admits of almost perfect adaptation and complete gradation for every stage of study from the primary class to the University. In its simplest forms it appeals directly to the youngest pupils in the public schools. In its farthest reaches it is still puzzling the greatest minds of the world. Here then is opportunity for grading and evidently at the same time the highest possible necessity for it.

It must be evident now that to get the best results from the study of history there should be one continuous course through all grades of schools, graded according to the advancing acquirements of the pupils, and above all, having perfect unity of purpose in all its parts. To work out such a course, or rather to make the attempt and contribute what we can in that line seems to me to express most fully the object of the whole discussion of the question before us. But now I want to call attention to the fact that neither of the methods of adjustment mentioned above between the colleges and so called preparatory schools is fitted to produce such a course as is desired, and as should be established. To take the University and high school as typical examples, each, with a distinct purpose and independent organization would tend to produce a course in history complete in itself though of different grades, and merely to bring these two courses near enough together so that one could succeed the other does not fulfill the requirements. For they are still distinct courses, each with an aim of its own, and so they lack that unity of purpose necessary to the highest results. The University is crippled by having to take students who have done some things they need not have done and omitted some of what was really essential, and whose whole work has been shaped to a purpose different from its own, while some portions of the preparatory work have been merely wasted effort.

This brings us to the third way, which I have not before mentioned, in which the whole course of history should be arranged and the adjustments of its parts effected. It is evident that if the course is to have complete continuity and unity it must first be contemplated as a whole and when it is separated into parts these must simply be parts of the whole, and not in themselves unified courses.

We must therefore get out of our comparatively narrow view as college professors, or preparatory teachers, and look at the whole question from the higher level of education in general, attempt to build up the course as educators with the whole field in view and not as specialists looking only to our own portion of the work. When we have found the whole aim of historical instruction and have decided upon the character of course which that aim requires, the rest of the problem is very simple; we have only to study the needs and advancement of our pupils to determine what portion is to be undertaken by the preparatory school and what will fall to the lot of the college.

Thus, instead of being brought directly to the consideration of the question as to what the preparatory course should be, we are brought to where we can see that this question is only a part of the larger one as to what in character the whole historical course should be, and in the solution of this larger question the solution of the smaller is inextricably involved. It is to the whole course therefore that we must first direct our attention, not to fix the arrangement of the details of the course but to determine its character. Only after this is fixed upon can we determine what portion of the course belongs to the preparatory schools.

"A treatise on 'Instruction in history' should begin by a reply to the question, 'What is History?'" are the words at the opening of Diesterweg's *Wegweiser*. Although obviously the answer to that question cannot be given within the limits of this discussion, yet that answer must be understood by every person who would undertake to teach history or intelligently to discuss its educational bearing. But while we cannot stop to answer the question, What is history? something of the meaning of history is absolutely necessary to our present purpose. This we shall see as we proceed to discuss its various portions as a subject of education.

The first question which we naturally ask to the study of any subject, or at least the first question to us as teachers, for upon it depends the character of instruction, is as to the purpose of the study. We are told that the purpose of historical investigation is comprehension; but is not this the purpose of investigation in any other science? Perhaps so. But if so in a far different sense. What was ordinarily understood by the term history is the history of the human race, or of some portion of it. In such history we deal primarily only with phenomena of the human race itself, with its intellectual and moral development, as shown in individual emotions, aspirations and motions, or the efforts of a whole nation as they are reflected in such of its individuals as come before us. Physical causes and phenomena are of no importance at all, or of importance only because of their connection with or bearing on the others. Such human events every individual comprehends in a sense in which he can comprehend no others. A great act of heroism appeals to him as no physical event can, and he comprehends it as he can no physical phenomenon, because he himself is actuated, and through his imagination can feel the play of the very same emotions that led up to it, can live over again, as it were, the act of the hero himself, and this constitutes his comprehension of it. And so with every historical event so far as it is truly human. In the study or investigation of history there is this constant interaction between the individual and the life of the race as he finds it in their recorded actions. An interaction, emotional, intellectual, moral, and it is this that constitutes, in the first instance, his comprehension of history and gives to it its character as a study.

This, though it is the first, is not the whole character of historical study. History, as we have said, is the record of the development of the human race. So far as it is complete it expresses every stage of human progress and every side or phase of human nature. Thus history not only appeals to every stage of individual development and is adapted to every grade of study, but it does a great deal more. Human nature has developed in the development of the race, and it is human nature with which history deals. But human nature, and exactly the same nature which the race has so far matured, is also the nature of the individual and in the study of history the individual is constantly finding himself reflected, or rather is finding his larger self, for the race is greater than any individual, and is having his true nature more fully revealed to him. The bringing to our own consciousness of what by nature we are is the very essence of our individual progress. But human nature in its development has not been at the mercy of chance or of mere caprice. It has been governed by the same profound laws of continuity that belong to all evolution, and indeed it has constituted the very highest form of evolution in the universe as we know it. Thus the aim of true historical study or investigation is the comprehension in the profoundest sense of that human nature, which is the nature alike of the race and of the individual, through the comprehension of the processes of its development, and to understand what this means we must recall that the comprehension here meant is as I have defined it what has been called the 'reciprocal action' between the individual and mankind.

If from this we turn now and try to get some idea of the proper course in history, the first point that meets us is that the value of the course will depend upon the fullness of comprehension. But the degree of comprehension, to use the words of another, "is dependent upon the abundance, delicacy, and energy of reciprocal action which we have experienced in our intellectual contact with mankind." This necessitates that the historical course should be a very long one, that the student should be kept in contact with the race through its history just as long as the school course will allow. As the reaction on the part of the individual is emotional as well as intellectual, and necessarily for proper comprehension the course itself needs to begin very early in the pupil's life when the emotions are most easily controlled, and can be most readily cultivated. Professor Hall speaks of the slowness of historical comprehension, and this we can readily understand because every side of the pupil's nature must be appealed to for proper historical study. So historical comprehension can only keep pace with the pupil's development. But this again only emphasizes the fact that the historical course must, as regards time, be a long one, although as regards the ground covered it should be a rather short one.

The first form of history was in the form of stories or myths with regard to past

heroes or deified ancestors. In these the mere facts of the past are lost sight of but its spirit is retained in an intensified form. They are thus especially adapted to early stages of instruction when the pupil's life is mostly emotional and form a necessary background for historical study. In its next stage history takes the form of annals, where the events are recorded at the time of their occurrence, by those who were themselves directly or indirectly the witnesses. The very name of history was derived from the fact that Herodotus had seen (idein) or personally investigated the facts which he related. Although the peculiarity of annals is that their author is a contemporary of the events which he relates, this is not the feature of them that is important for education. But from the fact of contemporaneousness, the events themselves must stand out with more individuality than in any other form of history. It is history of this character therefore, in which persons and events stand out with such distinctness and individuality that the interest of the child, not yet capable of sustained effort, may be centered about them and which is therefore capable of being given, without violating its spirit, in the form of a series of short, distinct, and self-centered lessons, that is adapted to the secondary stage of historical instruction. The service of such lessons to the pupil will be closely analogous to the relation of annals to the higher forms of history.

The higher forms which history takes on will also furnish the means for the next higher stages of instruction. With the accumulation in the annals of a large number of established facts, extending well back into the past, history can take the form of a continuous narrative in which the facts are arranged in the form of a temporal series and cover the known part of the life of a nation. History in this form admits of two stages of study, which we may illustrate by referring to our own history. In the first, which is transitional from the preceding, individual interest is still necessary and so a short period may be chosen for study and all the events grouped around one striking event or character. Thus Washington may be made a central figure for the stirring times which his life covers. A term's work of this kind may be made to include with considerable completeness about all the important events of this period, and form a most important introduction to the next stage which should cover for example, a continuous narration of the whole of American history.

This last step marks a distinct advance in the character of the historical course. In the earlier stages the pupil's interest can be aroused and sustained only for the time being; and so must all be centered on a single lesson, which is also self centered, has its catastrophe, as Matthew Arnold calls it, within itself, which it works up to and reveals. But as his grasp becomes firmer, his strength of mind greater, his attention can gradually be carried forward for more than a single day and in time he becomes capable of sustained interest in a continuous narrative.

It is also important to note carefully the essential features of the course I have so far imperfectly outlined. The study of many different men and events furnishes in a great variety of ways, constant appeals to the various sides of the child's nature, intellectual as well as emotional. He must grasp situations, reproduce in imagination existing conditions, reason about great events or actions, feel the thrill of great motives. How quickly does the boy catch the spirit of Putnam when he did not run the gauntlet, or of the rider of the black horse at Bemis' Heights, and how he feels the shame of the latter's subsequent treachery. It is just the response arising from this kind of contact with the world that is absolutely essential for the full comprehension of history in its subsequent stages. In the last mentioned stage of study, when narrative history is taken up, these purely personal emotions begin to give way to broader hopes, aims and aspirations, those of patriotism and humanity.

We come now to the last and highest stage of historical study or investigation.

The new arrangement of events in their historical order reveals the fact that the series has some other connection than the merely temporal one, and by the time the pupil has reached a stage where his interest can be sustained for narrative work at all, he can begin to feel, though not yet perhaps distinctly see, their deeper connection. But what is this inner connection between events? Do they occur haphazard, and take their place on the scroll of history merely by chance. If so history is only chaos and not worth our study. But it is safe to say that chance has as little play in human history as in natural history where natural law, pitiless and relentless, reigns supreme. Recognizing this a distinguished president of a very distinguished college has said that events should be studied in the relation of cause and effect. This would, of course, be a definite attempt to apply natural law to human history. But unfortunately for the plan, fortunately for education, events do not stand in the relation to each other of cause and effect, and so to study them would be to pervert their meaning. While we cannot dwell upon this point, yet the highest forms of history afford the highest purpose of historical instruction and some understanding is necessary here to complete our course.

The highest form of development which history has yet taken on is found in the modern conception of history. The new history, says a writer, "is above all pregnant with the notion that society is a great aggregate organism of forces moving according to laws special to it, and similar, and producing evolution and growth analogous to what we see in other forms of life." Thus the various events are not the succeeding terms of a causal series, but rather are the succeeding stages, or manifestation of the stages, of growth of the inner principles of the life of the society of which they are the outward expression and realization.

Society in other words is an organism which grows and develops like other organisms, grows from principles inherent in its nature, and this growth is but the unfolding of those principles, their fuller and more concrete expression from generation to generation. This fundamental conception of history gives to its study an entirely new character. The historian no longer studies events merely as events. He seeks to establish his facts as carefully as ever, indeed more carefully, for perfect accuracy is of greater importance, but he also seeks to understand their meaning, to trace them back, that is, to the principles of which they are the expression. To illustrate what I mean, we are just beginning to appreciate that much of what is best in our American democracy has had its origin in principles or germs of principles which appeared centuries ago in the organization of Germanic villages, and our modern life is but the expanding of those germs into their full fruition. It would undoubtedly be incorrect to say that the germs then appearing must sometime expand into just such life as we now have in America, but it is correct to say that under such conditions as have here existed they have expanded into our present institutions, and this expansion constitutes the underlying and determining principles, the principles which give meaning and character to all the separate events.

To lead his students to look at history in this way, to grasp the idea of growth, the idea of the unfolding from germs in which they were already inherent of great historical principles and institutions, to feel this expansion even where they cannot definitely trace the successive stages, is the province of the teacher of history in its higher stages. I need not tell you that the success of the teacher at this stage is absolutely conditioned upon the completeness and delicacy of that reciprocal action which I have so frequently mentioned.

But this is not all. No nation is ever constituted by growth in a single direction. It is made what it is, not by the expansion of a single principle, but by the unfolding of a congeries of harmonious principles all working together to one great end and constituting the national unity. While the working of a principle may be traced out singly, to look at this alone will give but a one-sided and inadequate view of history. The work of the historian and so of the historical student, must be to grasp the separate principles or ideas into one great idea which indeed they constitute, the idea of a state or nation, and thus to comprehend, in the sense I have defined comprehension, the spirit of the nation.

This is the last work of the historical teacher. But one greater problem remains for solution. That is, to grasp all the separate historical ideas and principles into one great idea, which shall give place and meaning to every separate epoch, to every separate people and to every event in history; the idea of humanity, and thus establish a true philosophy of history. But this problem no one has yet solved to the satisfaction of his fellows, although the need of its solution is now clearly apprehended, and the true answer to the problem this generation does not seem likely to find, because it is not in a mood that will permit it to find the true solution.

Two remarks remain to be made. The first is that no definite ground is prescribed which should be covered by such a course as I would wish. But it must be evident that the nature of the course does not demand that the history of any specific nations or of any specific periods should be gone over. It certainly does not demand, even in the fullest course, that history of the entire world should be studied. But the course admits of different fillings in this respect, and general history may form a part of it. The fact that I have tried to emphasize all the way through that the work at different stages should be of a different character, the fact of gradation. Those periods and peoples should be selected for study which are best adapted to the immediate purposes at the various grades of the work. The only remark of a general nature to be added is that the course should be intensive rather than extensive, at least in its earlier parts, and cannot be measured at all by the extent of ground that is covered.

The other point is to determine what part of this whole course should constitute the preparatory. All the work so imperfectly outlined will need to be included in the preparatory work, except only the very last stage where history as development begins to be studied. Even the first steps of this work high school students will be found prepared to undertake. The question should be settled entirely with reference to what the

pupils can do to best advantage, what they are prepared to undertake with most profit, and this in general will be the highest grade of work they are able to do. There should be no arbitrary fixing of limits here. Experience should be the only guide, as experience alone can decide how far the pupils can be profitably advanced.

NOTE—The Detroit High School course in history presents an example of a graded course conforming very nearly but not quite to the principles outlined above. Perhaps it will be of interest to subjoin it. It begins with the second half of the first year of high school work (9th grade, A class) which is devoted to the study of Washington and his times. The next whole year is devoted to general history. The first half of the third high school year (11th grade, B class) is devoted to English history. The second half of this year to an outline of U. S. history (Johnston's text-book largely supplemented by the teacher). The first half of the last year (12th grade) is devoted to topical work, the special study of periods or the following out of political principles. This is done by selective reading on the part of the pupil on topics and from references assigned by the teacher. Such a course should be preceded by such lessons in the lower grades as have already been indicated. We undoubtedly need to give in our American education to all the needs of child nature intellectual and emotional, much more attention than we now do, and to balance the different branches of our courses much more carefully.

THE COMPARATIVE MERITS OF THE LECTURE AND TEXT-BOOK METHODS OF TEACHING.

PROF. CHARLES E. BARR, ALBION.

The first aim of college training is to make men and women—of culture, of power, of purpose; not machines, that, given certain raw material, will turn out certain finished products, but men, who, through their own trained powers and the skill that they have gained may mould other men and sway them to lofty aims. All, nay most may not attain to this, but such should be and is the aim. To make a learned man is well, but what the means and how applied to build the man of power? This much objective; but how to rouse the student to a quickened zeal, a living purpose in his work? I always feel that inattention of a student is chargeable to me rather than to him. If a class fails in interest in a subject, the failure is my own. How shall we teach, that the best results may be attained on either hand?

Ephraim Emerton of Howard University says:—"In academic teaching three possible methods of instruction suggest themselves at once; the recitation, the lecture, and original work. We may assume, for the present that the value of recitation from a book is practically at an end. While admitting that the power of accurate re-statement of a thing learned is valuable to the student, the common sense of most has concluded that the time spent by an educated man in listening to such repetition is an actual loss to science, and that the brighter students of a class can employ themselves very much more profitably than in hearing the mistakes of their duller mates. Adding to this that the learning of what is contained in any one book, especially on a subject admitting wide difference in the point of view, can go but little way toward widening or deepening a man's mental capacity, and remembering that such acquisition is usually easiest to shallow minds, we may at once relegate recitations to their proper place, namely, in elementary instruction, where they ought to be insisted upon with unbending severity."

So says he, speaking especially upon the teaching of history, and Prof. Burgess of Columbia agrees with him and adduces additional reasons. Hear him:—"Unless this thought—that truth, as man knows it, is no

ready-made article of certain and objective character, but subject to the fallibility of human insight and reasoning, be continually impressed upon the student by the method of the instruction which he receives, he will, to a greater or less degree, make dogma of his learning, and this is the negation of progress in the wider and more perfect comprehension of truth. * * * What is contained in a book which has been studied by classes gone before, has, in the mind of a student not yet accustomed to sharp criticism, too large a presumption in its favor. He is too ready to acquiesce in its propositions and let memory act where the more difficult processes of criticism and judgment should be called into play."

The late Prof. Allen, of Wisconsin University, on the other hand has said: "Lecturing, however satisfactory in the German Universities, I do not find suited to the wants of my students as a regular mode of instruction. For suggestion and for review it may be employed with great advantage; and for regular instruction in fields where there is no suitable text-book, I am often obliged to have recourse to it. But it requires, to be efficacious, constant questioning, thorough examinations, and occasional inspection of note-books."

Prof. Laughlin goes further:—"The lecture system, pure and simple, is so ineffective that it ought to be set aside at once as entirely undesirable. The disciplinary power to be gained by the study is almost wholly lost to the student by this method of teaching. * * * With the average student, in almost any subject the lecture system leads to cramming. * * * It is doubtful if the student ever gets much, if any of that mental attrition on the subject which is the best part of the work. * * * Even the simplest form of recitations, is, in my opinion, better than listening to lectures."

Amid such conflicting views as these, supported by the matured judgment and experience of able men, it would behoove us all to pause and consider well their points of view. Perhaps, though apparently antagonistic, there may be found a pervading thought that in their seeming variance but binds them the more closely together.

First, then, the lecture. The instruction may be given by reading from the written page, by extemporaneous speaking, guided by leading heads, written or unwritten, or the lecture may be given by an act of pure memory, having before been carefully written out and learned. The student, in turn, may be required to listen merely, or to take notes that shall be or shall not be rewritten afterward. The lecture in this country, is usually associated with "quizzes" at regular or irregular intervals.

The text-book method pre-supposes a book in the hands of every student, who shall be required to prepare certain assigned portions for recitation day by day. This, again, is, or should be accompanied by class discussions of principles involved and by illustration and application to facts other than the book supplies.

Omitting for the present other modifications and combinations that readily suggest themselves, let us consider, so far as may be, these.

The lecture gives the teacher fullest freedom in the field. He is not bound by any method, by any fixed arrangement of his work, but selects his own. No man of original thought can do his best when cramped by others' ways, but proceeding upon the lines that he himself maps out can do himself the fullest justice and attain the highest results. He may select the topics that he will especially give force, may, in fine, individualize and specialize as he will. New light, from whatever source, if of sufficient importance to the subject, may readily be incorporated and

assimilated. If the teacher be an original worker in his department he will include his own observations, which always induces a special interest in the student. This mode of teaching has a special fascination for the teacher and excites, in the student, a stronger interest as the thoughts come warm and glowing from the heated brain of the living person before him than he will gain in the solitude of his room, poring over the printed page. More, the student is compelled to close and rapid thought. He cannot loiter by the way, but must use his every power to catch and hold the teacher's thought. In addition, if notes are taken, comprehension of an idea is necessary, before it can be written down. The condensed form in which the notes must be taken is a strong advantage as it necessitates a still further mental process—and the form, when the excitement and stimulus of the teacher's presence is gone, is one's own.

On the other hand, it may be urged that in this swift outpouring of a subject, the teacher does all the work. All the materials that he produces have been thoroughly elaborated and no thought on the student's part is required, beyond the mere reproduction of what has been said. He soon catches the knack of hearing just enough to enable him to answer in the weekly quiz, and time that would be more profitably spent in digging out hard places by his own effort, is so much clear gain for sport and play. We take the student as he is, not as he should be. Given no part in the elaboration of a theme, he becomes timid in dissent and the force of the lecturer is apt to spend itself largely in impressing the men that "Allah is Allah and Mahomet is his prophet." The more he questions others, the greater the presumption that he has exhausted the field and that his positions are impregnable. Thus the student is reduced largely to parrot-work and the power that he should gain by the use of his own intellect, and skill in defence of a principle he has made his own, are sacrificed. Further, unless the tendency is very vigorously combatted, and the subject very thoroughly organized his knowledge will be all at loose ends. Unless the student be required to take notes, this result is almost inevitable under the most favorable conditions.

The text-book method is pre-eminent for general convenience and simplicity. The assignment of a given lesson to the class, on which they are expected to be thoroughly prepared and the hearing of the recitations by the teacher constitutes a system that is simplicity itself. Fortunately, however, the day of "hearing recitations" only has almost passed, for the teacher who confines himself to extracting from his pupils the points taken up in the text, and to that alone, has no place in the educational system of today and will not be much longer tolerated. The method of study has been most familiar to the student in the lower grades, and the same method would seem natural upon his entrance into college. He has been drilled into it and it into him until he should have learned how to use his books to best advantage. Books are the repositories of accumulated knowledge and the student conforms, thus, to the habits of mankind. He has, in his book, a constant work of reference in which he may at any moment turn back to a forgotten or a hazy point. But perhaps the greatest benefit of this system is that in it, every student may be assumed to master every point and be held strictly to that account. He has no excuse for failure and the chance loss of a single lesson does not throw a whole subject out of joint as he can regain the missing links.

But in spite of its allurements, this system, too, has its faults. To be sure, it suits the lazy teacher, and many that are not, but it hampers one

who has the power of original work, binds him to a method that is not his own and tends to render his work shallow and artificial. The necessity of clinging to the text prevents due enlargement upon points of special interest, for a lesson of a dozen lines today and of twenty pages tomorrow leads unerringly to irregular work. Yet who, using a text-book, has not been forced to this? The dozen lines may be the harder work, but they afford little clue to the student whose mind is yet untrained. This expansion is especially necessary in the study of science, for a book is scarcely off the press when new facts are brought to light or deductions made that should find a place therein. In many subjects, notably in history and philosophy where diverse views prevail, the study of a single text may be a serious evil, for a one-sided view of a subject, discolored by partisan prejudice, is apt to cling to one from such association and to be with extreme difficulty dislodged. This tendency to dogmatism from one-sided study is perhaps no greater than obtains under the lecture, though it seems to me that the average student is far more ready to question the man than the printed work. "The book says," how many times does this statement come out as a sure clincher to some proposition—like as not totally misunderstood after all? Again, the use of the text-book tends to desultory study as contrasted with the lecture, for when the student can take his time and continually refer back to an obscure point, the necessity of learning once for all is gone.

Thus, while each of these systems presents distinct and certain advantages, each is subject to failure at important points. Can these elements of weakness be avoided? As a central fact it may be postulated that the student must be made to think—"cram" is not thought, nor is memory, though the last is of extreme value and the acquisition of facts indispensable. Thought goes before comprehension. A store of knowledge may be gained without real comprehension, and the man whose mind is stored with facts may be a very fool in the emergency that calls for rational action. Not mere facts but power in thought is the real end, and comprehensive, centered thought is the weapon with which life's battles must be won. The student's work must not, then, be made too easy for him, and for this reason, if for no other, the lecture system, pure and simple, must fail of complete success. Shall we, then, adopt the text-book, or is there some other system, by which, avoiding the defects, we may reap the advantages of both? Various schemes suggest themselves, first of all, probably, from the nature of the case, a combination of the two—that is, a text-book for an outline, supplemented by lectures, the whole accompanied by free discussion in the class. This method, I am bound to say, I have used with great advantage, but it is still heir to many of the ills of its parents, and an insufficient text is a continual annoyance.

The method that I have finally chosen as affording the best results, a method, moreover, that is sufficiently flexible to admit of much individual choice, is as follows:—The lecture method is used, but each hour is opened with a short quiz, lively, suggestive, often leaving questions incompletely solved but so far developed that each member of the class can work them out before the next day. By this manner of conducting the quiz, and by subsequent return to these points, full discussion by the class is encouraged and compelled. As soon as the class is well woke up and ready for work, let the teacher take the reins in his own hands and begin the talk. The lectures must be short, hence packed full of meat, and leading points should be carefully emphasized. In matters of detail, the class should be asked to

cease writing and to use the matter or not, as they choose. Every man is required to take notes, to be afterwards written out on alternate pages of a well-bound note book, and handed in for examination and criticism. In some subjects a text book will be called for as well, but once in the hands of the class, let it be used largely as a work of reference and the instruction proceed independently of it. Written tests, in place of the regular quiz and lecture, should be frequent; perhaps at times, though very rarely, as often as twice or three times a week. They should always come unannounced and, so far as possible, at unexpected times. When the student realizes that he is liable to be called to sudden account at any moment he will keep the whole subject fresh in his mind; and the time thus lost to the formal lecture is more than regained by a fidelity in the taking of notes and a thoroughness in advance work that obviates the necessity of review.

I hear the objections raised at once that this method requires a work that the student will not do; that the careful preparation of the note-books will absorb too much of his time—time that he might better spend in treading new ground; that it is not applicable to large classes; that, in fact, it is only the same old lecture system, after all. Pardon me, it is not. With classes of from sixty to eighty men the work has been done, and in such spirit that material was almost daily brought to class that had been obtained only after tramps of miles. And the note-books;—the alternate pages are left blank, not that they may remain clean and white, but that from reading and research outside the class, they may be filled. And the time spent upon these books I consider one of the greatest gains; for the student is obliged to jot down, here and there a point, condensed to the fewest words, a mental process of extreme value. Then, after the next day's quiz, in writing them out in his book, briefly, to be sure, the additional process of elaborating his first notes, fixes that which he has heard and makes it all his own. A chain is no stronger than its weakest link. A class proceeds at the pace its weaker members set. By this method, the constant stimulus and spur of the quiz and written test secure from the industrious and slothful student alike a uniform thoroughness that can be gained in no other way. Not the brilliant but the lagging minds need help, and he teaches best who so does his work that the strong advance and the weak gain strength with every step to run the race with them. Not applicable to large classes! It is the method, above all best suited to their needs, for the burden lies on all alike, and every man is reached.

To sum up, then, the lecture is desirable because it affords freedom to the teacher and allows him to specialize as he will. It promotes originality, gives life to dry bones and compels close thought and quick comprehension on the part of the student. It fails in that the student is fed with too highly elaborated food, and having only to follow, loses in intellectual strength and skill.

The text-book method is advantageous from its convenience, because it teaches the student how to use books and because it affords a standard for preparation. But it hampers the teacher, prevents original treatment, unless confined with the lecture and especially tends toward dogmatism.

The modified lecture method certainly possesses the advantages of the pure system. In addition it provides work for the student, insures his thorough comprehension of the lectures and trains him in the expression and defence of his own ideas. He becomes the teacher's assistant in the search for truth. It is not so convenient nor so easy as the text-book method, but convenience and ease are not the goals of a teacher's ambi-

tion. It does teach the student how to use books—not a book—encourages him in research and more effectually, it seems to me, than any other way, leads him to the formation of intelligent, unbiased, and comprehensive views.

Of course, what I have said in this paper should be applied only to college teaching. As before a college section, the paper has been addressed to college men and I by no means would suggest that its methods be applied in earlier instruction. They require, for their development, young men and women who have already passed through the preliminary training of the grammar and high school grades at least.

DISCUSSION.

PROF. J. H. KLEINHEKSEL said:

The subject under discussion is one of interest and importance; it is as much a matter of interest to the instructor to hear how his methods are judged by others, as it is to the sometime student to recall how these methods succeeded or failed to accomplish their object. It is a subject of importance because it touches the question: Which is the method that best promotes learning, extends the field of knowledge, and cultivates power and skill in leadership?

I have listened with interest and approval to the very clear and judicial paper of Prof. Barr. If I have understood correctly the general conclusion of the paper was: The text-book for the common school, the lecture system for the professional and post-graduate courses of the University, and for the undergraduates of the college proper, a judicious combination of the two. With this I agree in the main. But any statement so general as this must have its exceptions and limitations. For beginners in the common school much must be done by object lessons; the rudiments of sciences like botany can be taught best without a text-book. Corresponding exceptions exist in University instruction where the lecture system alone is certainly defective; the classics as well as the mathematics need a text-book as a basis.

Prof. Barr's description of the text-book and lecture methods seems entirely candid and fair. Merely "hearing lessons" from text-books is, of course, antiquated, and no teacher worthy of the name, would consider that the burden of his work. To my mind the text-book method means the use of the text-book as a basis of instruction which, by comment, by illustration, and by an unflinching supply of enthusiasm, the living teacher, like a good cook, makes palatable to the student's intellectual appetite.

The essential difference between the two methods of teaching is this: By the text-book method the lesson is assigned and learned before the real work of the teacher begins, who then seeks to vitalize and fix by drill and application the lesson of the hour. By the lecture system, on the other hand, not only does the instructor indicate the best sources of information and methods of study, but his principal work is to impart by word of mouth that complete body of information which the student is expected to master. By the former method the student's work comes first; by the latter it comes last. The former gives the work of daily test and drill to the teacher; the latter leaves it to the student.

The lecture method undoubtedly is superior in some studies and stages of progress. Given a student sufficiently advanced in such a study as history and literature, which he likes, and then an instructor who draws by his magnetism and his oratory, and the system is perfect. Abelard electrified Europe by his lectures, because his very presence was an inspiration. If a *real* teacher be in the chair, the mere memory of his manner is a lifelong legacy. But such men are rare. In too many cases, a course of lectures is a "book doled out in small slices" in a humdrum way. The average student does little with his notes. He has too much to do. His notes and even his references become antiquated, and in a few years he finds it hard to see the benefits of his note-book, carefully prepared, but never properly worked up and examined.

Gladly admitting, however, that the lecture system has its place for the really great teacher and the ideal student, that is to say, for the exceptional instructor and the exceptional student, in exceptional studies; for the youth of the American college, such as they are, the lecture system pure and simple, such as has been long in use in the universities of Germany will not do. Indeed, the system is confessedly defective even in Germany, where the object of study is "pure learning" and not preparation for professional life; for there they have called in the aid of the museum, the laboratory, the observatory and that peculiarly German institution, the Seminarium. And as for

the American undergraduate, it is an open secret that he is not "in demand" at the German Gymnasias, because their system of discipline and instruction appears to be ill adapted to the temperament of "Young America." The American boy needs guidance; he is not ripe for the freedom of the lecture system. It is a system subject to peculiar evils and abuses which it is very difficult to prevent. Cramming, coaching, and the evident tendency to superficiality are evils too common to need more than an allusion.

Finally, the lecture system, pure and simple, is in direct conflict with the fundamental principles of all modern education. Let the following laws and maxims of education serve as examples: "The pupil should do, not hear only." "Do not tell the pupil what he can find out for himself." Research and drill combined produce efficiency." "Question and answer—contact of mind with mind—gives strength." Do not make passive students." "Use the Socratic method."

These principles, it is true, are usually given for elementary instruction, but I am not aware that they have ever been proved of no force in higher education.

It is my judgment, therefore, that the two methods combined give the best results—the text-book to insure proper preparation, system, and drill; the lecture to supplement, to apply, and to inspire by the power of the living voice.

EDUCATION AT THE MICHIGAN AGRICULTURAL COLLEGE, —ITS SCOPE METHOD AND RESULTS.

BY PRESIDENT O. CLUTE.

Before 1850 there had been sufficient thought in Michigan of the need of a school of agriculture to enable its friends to secure a clause in Sec. 11 of the revised constitution, adopted in that year, commanding the legislature to provide as soon as practicable for the establishment of such a school. Having secured the constitutional requirement the friends of the school continued their efforts by urging upon the legislature its duty to obey the requirements, and in 1855 secured the passage of an act establishing the "Agricultural college of the State of Michigan," the chief purpose and design of which, as stated in the act, were "to improve and teach the science of agriculture." Sec. 5 of this act says: "The course of instruction in said college shall include the following branches of education, viz.: An English and scientific course, natural philosophy, chemistry, botany, animal and vegetable anatomy and physiology, geology, mineralogy, meteorology, entomology, veterinary art, mensuration, leveling, political economy, book-keeping, and the mechanic arts which are directly connected with agriculture, and such other studies as the Board of Education may from time to time see fit to prescribe, having reference to the object specified in the previous section."

On this broad basis including English, mathematics and the natural sciences, the college was organized in 1857, and carried on its work until 1861, when the legislature reorganized the college and placed it in charge of the State Board of Agriculture. The act of reorganization declares that the "design of the institution is to afford thorough instruction in agriculture, and the natural sciences connected therewith; to effect that object most completely, the institution shall combine physical with intellectual education, and shall be a high seminary of learning, in which the graduate of the common school can commence, pursue and finish a course of study, terminating in thorough theoretic and practical instruction in those sciences and arts which bear directly upon agriculture and kindred industrial pursuits."

As if to leave no possible doubt as to what the law considers the scope of the Michigan Agricultural College the same act, in Sec. 15, goes on to

say: "The course of instruction shall embrace the English language and literature, mathematics, civil engineering, agricultural chemistry, animal and vegetable anatomy and physiology, the veterinary art, entomology, geology, and such other natural sciences as may be prescribed, technology, political, rural and household economy, horticulture, moral philosophy, history, book-keeping, and especially the application of sciences and the mechanic arts to practical agriculture in the field."

Section 18, of the same act, declares "Three hours of each day shall be devoted by every student of the college to labor upon the farm, and no person shall be exempt except for physical disability."

Thus by State laws, prior to any act of Congress on this subject, the scope of our college, as a school of agriculture, was clearly and positively defined. In 1862 Congress granted to the several states an amount of public land equal to 30,000 acres for each Senator and Representative to which the States were respectively entitled, "for the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." Michigan accepted this grant, and under its provisions received 235,673 acres of land, the proceeds of which are held for the benefit of the Agricultural College.

The original charter of the college by the State did not contemplate a mechanical department or a military department at the college, but the passage by Congress of this land-grant bill of 1862, and the acceptance of its provisions by Michigan, made it necessary to add these two departments to the college course. The military department was organized as soon as conditions permitted, and has gradually reached an honored place and influence. The sales of the lands granted by congress were somewhat slow, and it was not until 1885 that the income from this source warranted the addition of the mechanical department, which has now become strong and popular.

What is required of our Agricultural College in the way of instruction in agriculture, mechanics, industry, and military affairs being thus clearly defined in State law and national law, let us consider what effort has been made by those who have administered the college to comply with both the letter and spirit of the laws.

The college was dedicated on the 13th day of May, 1857. Hon. Joseph R. Williams had been chosen President, and was installed in office on the same day. His noble inaugural address was the dedicatory address of the college, and a worthier one could not have been spoken. In his address he gave an outline of the scope of the college which the development of 33 years has not been able fully to realize, though the growth of the agricultural department has been true to the plan he then laid down. President Williams in the course of his inaugural said: "First, we would begin with the farmer himself. It has been aptly said, that the only part of European agriculture that has not been improved, was the man himself who tilled the soil. Now, there is where we ought to begin. The farmer ought first to be a sound man physically. He should be taught the laws on which his own life and health depend. He should have capacity for thought and action. Morally, physically, intellectually, he must be a man, before he can be a farmer."

"A farmer is a citizen, obliged to bear his portion of public burdens, amenable to the laws, and in a humble or a wider range, may become an exponent of society. He should be able to execute, therefore, the duties of even highly responsible stations, with self-reliance and intelligence. The constitutions of the Union and of his State, he should comprehend, and the laws and forms relative to township and county officers and their duties. He should be qualified to keep farm accounts, draft ordinary instruments, survey his farm, and level for drains or highways. His native language should be a flexible instrument at his command, which he should speak and write with ease and vigor, that he may impress and instruct others, avert mischief or inculcate truth. A man moved by earnest reflection or deep emotion, should have capacity to give them utterance and force in his mother tongue. The prophets and leaders among men, are those who impress themselves on all around them. These are incidental, yet necessary, though not original and primary objects of the institution.

"A farmer should be a chemist, so far as the comprehension of the principles which affect his daily life and business, is concerned. He may not be an analytic chemist, but he should be familiar with those laws, the observance of which is indispensable to safety and success, and the defiance of which is destruction. When you make a loaf of bread, or a pound of butter, or a barrel of soap, or burn a coal pit, or make a hot-bed in a garden, or ignite a friction match, or snap a percussion cap, or light a gas-burner, you are playing with the most startling chemical laws. The extent of a man's acquirements in chemistry must depend upon his taste and aptness, but all should be familiar with those ordinary laws which affect and penetrate our daily and hourly business and life, in country and city, within doors and without.

"This science teaches the value, qualities, nature, and application of manures. The question of fertilization or sterilization of the earth is here involved. A periodical renovation of the soil is not only the base of agricultural success, but in fact of all political economy. How vast the difference between leaving the value of fertilizers to mere vague conjectures, or making them the subject of positive analysis and actual demonstration, under the hands of the chemist."

Having thus defined the general training and the training in chemistry which the college should give, President Williams then showed that physiology, veterinary, entomology, physics and botany should be taught in the same spirit. And then he adds: "Thus the field of research for the farmer has no boundary. New subjects, each in itself sufficient to engross years, constantly crowd upon the attention. The difficulty will be only in the selection. Master all human knowledge on the subject, and yet the greater truths remain unfathomed. Do you understand any of those influences and affinities by which a plant germinates and grows? Do you understand the process by which a single flower blooms? Do you understand how the clover, vivified by the genial influences of light and heat, gathers from the earth, and the air, the rains and the dews, contributions that make up the growth, and, restored to the earth, renovate its exhausted condition? These occult mysteries are beyond your comprehension. The growth of a single spire of vegetation, confounds your wisdom as much as the existence of those nebulae of worlds, whose light travels through thousands of years to reach our planet. His creations are so brilliant and startling that two centuries since, a chemist would have been hung for a

wizard, yet all his analyses and re-combinations are but soap bubbles, compared with the mysterious and silent operations of Nature's great laboratory all around us and beneath our feet, which clothe the earth with beauty, people it with myriad swarms of animal life, and feed and clothe a thousand millions of human beings. Nature hugs within her bosom her most vital lessons, undivulged. The Newtons and Keplers of Agriculture are yet to appear. The contemplation of these facts should awe us to humility.

"The chief end and object in educating the farmer is to teach him to subordinate himself, and all animal and vegetable life around him, to those inexorable laws, moral and physical, the violation of which meet with swift retribution. A farmer should perpetually bear in mind that one generation of men hold the earth in trust for the next. We are all linked indissolubly to the past by obligations of gratitude, and to the future by aspirations of hope. Without the recognition by preceding generations of the ties of dependence and affiliation, we could pluck no fruit from the orchards planted a century ago. The delicious peach would have been a bitter almond. We should witness none of that perfection in crops which supply sustenance for the nations, nor in the flocks which whiten the plains, nor the cattle upon a thousand hills. The triumphs of philanthropy as well as of genius, would have been wanting to relieve the sad and terrific history of our race, with its few charming and creditable pages. It is said that in Spain, when a man eats a fruit, he digs a hole in the ground with his heel, and plants the pit or seed by the road-side. He thus pays to posterity the debt he owes to his ancestry. Accordingly, along the highways of Spain, the traveler is gratuitously supplied with fruit. Here is an illustration of how trifling and well-directed acts serve to hold by close bonds of sympathy successive generations of men, and how easily the comforts of industry and civilization are promoted.

"A great advantage of such colleges as this, will be, that the farmer will learn to observe, learn to think, learn to learn. Men engaged in other callings have constant communion and collision with each other. In the vocations of the city, men are in a constant school. The farmer, isolated and engrossed with labor, feels not the advantage of constant discussion and observation. That discouragement will be partially neutralized here. Three or four years of study, intercourse and discussion, amid the accessories and aids which such an institution ought to afford, will surely tend both to enlighten and to fit the mind for further comprehension and acquirement. When the bigotry that clings to traditionary errors and practices is superseded by a bold and comprehensive spirit of inquiry, the farmer has a new world open before him. Every man who acquires thoroughly, even all the information attainable in a college like ours, should become a perpetual teacher and example in his own vicinity. Thus one of the grand results should be a far wider dissemination of vital agricultural knowledge."

One familiar with educational theory and practice prior to 1857 will see that this address by President Williams is radically different from much of that theory and practice. The first president of Michigan Agricultural College had caught much of the spirit and method that in our day are known as the "New Education." President Williams resigned after a short connection with the college, but not before he had strongly impressed his thought upon the college and the people of the State. His successor, Dr. T. C. Abbott, was imbued with the same thought, and had the cautious

wisdom that enabled him gradually to embody it in the course of education adopted at the college. In one of his addresses, speaking of the method of education which is now giving our college such honorable fame throughout the world, Dr. Abbott says:

"Science has taken so fair a hold of agriculture that a knowledge of botany, animal and vegetable physiology, entomology, chemistry, meteorology and mechanics are of essential service to the thoughtful farmer. The relations of fertilizers to vegetable growth are beginning to be known, and chemical analysis to be valuable, and some light has been thrown on fattening processes, the actions of soils upon soluble substances, and a variety of other things. Especially are new facts being elicited which admit of classification and useful application, and even now it will be found that scientific knowledge is one of the most valuable aids to the farmer. Science has always vindicated its practical nature. The astronomy that Socrates thought useless, rules the navigation of the world; the "Swing-swangs" that were ridiculed in Hooker's time gave us the clock, and what seems more remote from our telegraph than Galvani watching the contractions of the leg of a frog? Nothing is more practical than science.

"For the continuance therefore of his education, but just begun, at college, and for his best service to society, the student should be well trained in science. But neither student nor teacher should ever forget the agricultural aim in view. The teaching of the sciences should be saturated, as it were, with the agricultural element, with illustrations drawn from the art, and constant applications of principles to the business of the farmer. In brief then, the college should impart to the young farmer the elements of such instruction as makes a man and a citizen, should ground him on the sciences on which agriculture depends, should indoctrinate him in the best existing rules and practice of his art, should make him alive to its needs, acquainted with the theories, discussions and experiments going on for its advancement, and fire him with enthusiasm to place his business on a par with those in which skill, intelligence and thorough scientific preparation receive on all hands a due appreciation."

When in 1885, after twenty-two years of most honorable service, Dr. Abbott was led by failing health to resign the presidency; his successor, President Willits, brought to his work the spirit and the method that had been the inspiration and the practice of his predecessors. Prior to that time the college had not introduced mechanical training, but in the winter of 1884-5 the legislature made an appropriation for a building and equipment for this department. His predecessors had spoken nobly for agricultural education. President Willits indorsed what they had said, and added his own word, following the same line of thought in the direction of mechanical training. Among other weighty words he spoke the following:

"It has the platform for legitimate, deliberative discussion, and all over the country the best equipped minds and the brightest intellects are engaged in this, to us, new leading topic. Continental Europe, older in these industries, long since saw the necessity for special attention to the matter, and during the last fifty years has expended large sums on schools of technology, and the promotion of science lying at the base of all the industries. The result has been marvelous. England, that once ruled the industrial as imperially as she did the commercial world, at last became anxious over the competition of nations that for half a century or more had been her lavish purchasers, and began to inquire how this ability to compete in her manufactures had been brought about, and was, after a

full investigation, into the primal causes, compelled to admit that it was to be attributed more than anything else to the schools of technology and mechanic arts which those countries had had the foresight to establish. England, following the lead of her doctrinaires had adhered to the policy that the public should not be called upon to foster professional schools, but that all such, whether learned or industrial, should be the creations of private enterprise supported by their patrons. The idea was that if there was sufficient demand for them there would naturally be ample means and patronage for their establishment. But experience has shown that such is not the case. The plant for such institutions is costly and the profit uncertain, hence private capital was slow in its investment in such enterprises. Education of any kind is always costly, and if made general all experience shows that in a large measure it must be sustained by the State. But this was of a class far more costly than the so-called liberal education. It takes time to establish and develop it. Continental Europe was nearly fifty years in experimenting, and in so doing spent vast sums of money before the results heretofore mentioned were reached.

"But there is an additional reason why such institutions are necessary here. In America the industrial arts are in their infancy and we are brought face to face with the full grown industrial organizations of Europe with which we must compete. Mechanical science has now reached such a stage of development that the mere artisan, that is, the man that devotes his whole time and energies to the manual labor of his employment, will rarely have a comprehensive knowledge of the industry he seeks to promote. Then again, the division of labor is so great that a majority of laborers know only one thing, or perform only one operation in the many that go to make up the product, and know nothing of the general principles. The laborer becomes a machine if confined to the machine, and while the industry gains in the one direction by the skill of the human machine, it loses in the other the intelligent inventive genius of the man of observation, thought and experience. Further, the day of old fashioned apprenticeship is ended, or practically so, when the young man was bound to serve from 14 to 21 and the master was bound to teach all the principles and the arts of the industry, so that with the experience of seven or more years, and the general knowledge picked up here and there he became a mechanic well versed in all the principles and details of his profession. Our industries are an important factor in our body politic, and our future is to be largely shaped by our ability to manufacture as well and as cheaply as any one else. To do this we must put intelligence into our shops and theoretical instruction into our schools. We must occupy this ground ourselves, with our own brains and muscle. Two-thirds of our foremen and master mechanics are foreigners, educated in the technical schools of Europe, or instructed by an apprenticeship, which is not germane to our institutions. An apprenticeship is considered by our young men but a remove from serfdom, and the only chance we have for success is to import our skilled mechanics or educate them here.

"Hence there is a place, and a large and well-defined one, for schools of technology; institutions where may be taught the sciences upon which our industries depend. The mere shop is no place for this instruction; there is neither time nor opportunity to discuss the general principles upon which the industry is based. There should be some place or institution capable of making an intelligent mechanic, intelligent in all the principles of mechanics, in the laws of motion, of sound, of light, in the kinds and

strength of materials, of friction, inertia, electricity, steam, chemistry, with enough of the manual training to demonstrate the principles. Such a mechanic with this knowledge can step into a shop and in a short time distance the man who has no schooling in these principles; he can sooner acquire the skill in his profession, and it will be of more service in that his intelligence goes with it hand in hand.

"The object of our new department of mechanic arts is to supply this want. Our purpose and wish is to take the young man who has an aptitude and taste for mechanical industry from the shop, give him a thorough course in drawing and designing, thorough instruction in all those general principles which he can not obtain elsewhere, for the reasons heretofore stated; give him daily practical work in the shop, and then return him to the shop with the skill competent to take his place as a journeyman, and an intelligence fitting him for foremanship; with a moral purpose not above working at a bench or a forge, and yet with a capability of handling men and affairs. Such a man will, as a journeyman, be first to be engaged and the last to be discharged; such a man is on the high road, through the shop, to the head of his industry, a journeyman with the germ and possibilities of a master mechanic. We do not seek to make men 'bosses.' Our industrial foremen are a little shy of the 'college bred mechanic,' for the reason, as they say, 'he is apt to have the big head.' But that depends upon the college in which he is bred. We grant you that the tendency of the regulation college, whose purpose is a general and so-called liberal education, is to breed, to use the words of another, 'a sort of contempt for manual labor and the man who performs it, and to give its students very stilted notions about culture and the exalted character of the work they must do, because, forsooth, they are graduates.' Such a man 'is not calculated to blossom out into the common-sense, aggressive, enterprising young American, who is ready to do anything honorable until something better offers, and who is sure to make his way in the world.' Is it possible to have a college that shall educate the scholar and yet save the artisan; that shall make the man of culture and yet preserve the farmer? We believe it is, and that the Agricultural College of Michigan is such an institution."

In gradually adopting the course of instruction now followed at our college the thought above quoted from the three able men who have been its leading spirits has been followed. In the first place a prominent position has been given to the English language. A correct and strong command of his native tongue gives to a man in any and every walk of life a most valuable power. In order to learn the English language the student must study that language. The great Greeks whose poetry and eloquence fire our hearts even yet, studied their native tongue. The great Romans, whose works place them among the teachers and inspirers of men, studied and used the Roman tongue. We shall best learn English if we study and use English. We shall best use English if we form our style by study of the great masters of that living tongue with which we speak, masters such as Shakespeare and Milton, Phillips and Gladstone. Thinking thus, the English course at the Michigan Agricultural College has been planned to give students a command of the English language by studying its structure and its greatest works.

Next to command of his native tongue, every man needs the training in putting together and taking apart, in synthesis and analysis, which mathematics gives. To train in that method of reasoning that leads to definite

conclusions, and which disciplines the mind to order and accuracy, mathematical science has always had a prominent place. Accepting this estimate of mathematics as an aid in the training of mind as well as an instrument of practical utility, the Agricultural College has provided for education in mathematics to such extent as required by our scope. In the agricultural course this includes a somewhat complete training in algebra, geometry, trigonometry and surveying. In the mechanical course analytical geometry and the calculus are added to these.

The leading object of the college is to teach agriculture and the mechanic arts. The training in the English language and in mathematics is given to this end. In the farther development of agricultural and mechanical teaching, it is found that both of these depend upon several sciences. Scientific agriculture for the methods it employs in treating soils, fertilizers, and foods depends on chemistry; for the methods it follows in selecting fruits, grains, grasses, vegetables, and in breeding from them new varieties, it depends on botany; for the methods by which it selects and breeds stock it depends on zoölogy and physiology; for its knowledge of insect foes and the methods of fighting them it depends on entomology; for its treatment of ordinary animal diseases it depends on veterinary; for its knowledge of the great diseases that ravage the animal and vegetable worlds, and are the great drawbacks to all forms of profitable agriculture, it depends on bacteriology. Our college has, therefore, provided professors of botany, zoölogy, chemistry and entomology, veterinary, anatomy, physiology and physics.

The course of instruction in all these departments has been shaped to the end of fitting students to apply the principles learned to the practical pursuit of the various branches of agriculture. Among the first officers of the college were professors of agriculture and horticulture who were supplied with every appliance for which there was need to teach the practical application of scientific principles to the various branches of agriculture,—that is, to teach the *art of farming*.

When, in 1885, the mechanical department was added, a suitable building was put up for wood-shop and iron-shop, tools and machines were procured or constructed, able professors were secured, and the mechanical course was inaugurated. It trains students in the sciences on which the mechanical arts depend, and it trains them in the actual manual work of the shops. Students use square, saw, plane, hammer, chisel, lathe. By the time the course in the wood shop is completed the apt student can do work of as good quality as the carpenter's or cabinet maker's apprentice at the end of several years of service. In the iron shop the best machines for this kind of work are in use. By their aid, iron is not less pliable than wood in the student's hands. Having the drill of the drawing room and the class-room, to guide them in shop-work, they are, before their course is finished, able to build steam-engines and other complicated machines.

To be able to express a fact or an idea in words is one evidence of training. To be able to express a fact or an idea by the product of the skilled hand, guided by the disciplined brain, is evidence no less sure. In most departments of science and the mechanic arts the expression by the hand in drawing becomes an essential part of modern education. In the Agricultural College all students are trained in free-hand drawing in the freshman year, and then are required to apply their skill constantly in the study of botany, anatomy, entomology, zoölogy, agriculture and horticulture. By the time their course is finished those who have aptness have acquired a

facile skill in the use of the pencil. Throughout the mechanical course mechanical drawing is an indispensable part of the study. It includes projection, descriptive geometry, shades and shadows, perspective and making drawings of machines.

The Congressional act of 1862 also required the Agricultural College to teach military science and tactics. It is quite possible that the college would have put instruction in military subjects into the course if no such requirement had been made, for experience shows that such training to a limited extent has a beneficial effect on the health and habits of the students. We are provided by the U. S. war department with a trained military officer to give instruction, and with arms, equipments and ammunition, and Michigan has built an excellent drill hall and armory. The military training shows increased improvement from year to year, and is constantly gaining higher appreciation from faculty and students.

Such, in general, is the present scope of instruction at the Agricultural College; training in the English language, in mathematics, in history, in political economy, drawing, in the sciences, in agriculture, horticulture, stock-breeding, and veterinary, in practical and theoretical mechanics in wood and iron, and in military science and tactics.

The method by which a system of education is pursued is hardly less important than the system itself. A good method of teaching has often saved a poor system from utter failure. An inferior method has often brought failure to the most wisely planned system. In the Agricultural College we are still, in some measure, believers in text-books. At the stage of training at which our students come to us there is wisdom in using the book. To assign a lesson from the book, and expect that lesson to be learned, and to be recited in class, is for nearly all topics and students a method that gives good results. In addition to the text-book the word of the live teacher is an indispensable force in teaching. The teacher explains, enforces, enlarges on the text. In some branches with us a share of the instruction is by lectures, but the professor constantly refers to the text-books and library books, and the lectures are supplemented by laboratory work.

In all departments of our college the instruction is largely carried on by the laboratory method. The *labor-atory* is the place for labor. The student labors at what he is to learn, applying in the labor such principles as he has already learned. In mathematics this has long been the method in every school throughout the world, for the student having learned, from the text-book or the instructor, certain rules and methods applies these in the solution of many examples or problems. The tendency among many modern educators is to extend this method to all studies. In our college the student in English language is set to work with the language, its history, its structure, the relation of its parts, its use, its analysis and synthesis. In English literature he studies masterpieces of style and thought, he learns what are the elements that make them great, that enable them to appeal to noble minds in every age and in every walk of life.

If the laboratory method is thus used in mathematics and English, much more is this the case in all the natural sciences. Here every step is a study of things. In botany the plant, in entomology the insect, in zoology the animal, in geology the fossil or the rock, in chemistry the simple or the compound is always before the eye, and can be manipulated as desired. The microscope, the scalpel, the hammer, the test-tube, or the re-agent is always at hand to aid in learning what the thing has to reveal.

This laboratory method includes with us another element which we consider essential, that is our labor system, which is but a phase of the laboratory method. In animal physiology the student does not become an expert by looking on while some other person does the dissecting; he himself must use the knife for a period sufficiently long to acquire some skill in its use. In chemistry the student does not learn the use of all the complicated apparatus by seeing it used by others; he uses re-agent and balance, filter and blow-pipe until they are as familiar to his fingers as the playthings of his boyhood. Agriculture in its varied phases of general farming, dairying, stock-breeding, stock-feeding, gardening and fruit growing uses many tools and machines, produces many and very varied products. A student can learn the use of these tools and machines and the management of these many products only by actual labor with the things. He may listen to able lectures on the hoe and its use with profit; but a few weeks' use of the hoe will give him a better control of that useful tool than many courses of lectures. He may see his professor set cions and buds in the most approved manner, but he will learn how to set them only by using wax and knife and bast himself. By our system of teaching and of labor, the farm, stables, feeding pens, silo, cellars, gardens, orchards, and forcing-house all become parts of a great agricultural laboratory in which the student learns to do by doing. To this "doing" he devotes some hours each day for five days of the week.

In mechanical pursuits there is the same need to learn the use of tools and material by using them. Hence our wood shop with its many exercises; our blacksmith shop where the student, working with pleasure at the forge and anvil, learns by experience that his hands and face may be blackened by unaccustomed grime without his descending in the social scale; and our iron shop in which the use of all the improved machinery for working in iron is successfully taught.

Labor on farm, in gardens, wood shop and iron shop is thus an essential part of our educational system. It was introduced when the college first opened under President Joseph R. Williams in 1857, was adhered to in all the pioneer vicissitudes of a new departure in education, has grown into the very fibre of our work. We are glad to believe that we have contributed something of value to the successful solution of manual training in the higher education.

Thus far I have spoken only of the educational scope and method. By act of Congress in 1888 there was given to each state the sum of \$15,000 annually, to be expended in conducting experiments in agriculture. Michigan accepted the grant, and established the experiment station at our college. We had already been experimenting for a number of years, and had published a number of bulletins and reports giving results of the same.

In this early experiment work the president of the college had been general director, and the professors in different departments had carried on the experiments in their departments. This system worked well. Hence after the Hatch bill had passed Congress, we simply turned our experiments over to an experiment station organized under the provisions of that bill. We continued the president of the college in the office of director of the experiment station, and the professors in certain departments were made heads of corresponding departments of the experiment station. This method gave us at once in the station a body of men trained in the work, knowing what experiments need to be tried, and the best

methods of conducting them. And it also added to the educational facilities of the college, for the experiments conducted under the supervision of each head of a department are often available for the instruction of his classes or the classes of a fellow professor; moreover in some experiments students can assist, and be greatly benefited by the educational character of the work. Again our method made use of our present plant in the way of offices, implements, stock, and apparatus, thus giving a large amount of available experiment plant for immediate use, and saving a large expense in duplicating offices and apparatus already on the grounds. As before the Hatch bill was passed our method had worked well, so it has worked well since we organized under that act. In several of the departments the experiments have already reached results of much value, and our bulletins, giving a statement of such results, have been widely sought after.

We are conscious that this experiment work is only just entered upon. There are some lines of it that give promise of results of very great value. As rapidly as conditions will permit we shall go forward, and, by suitable methods, interrogate nature as to what information she can give us for the prevention and treatment of animal and vegetable diseases; as to the best methods of growing all farm, garden and orchard crops; as to the recondite influences that draw plant food from the air; as to the animal and vegetable parasites that become our helpful friends because they prey upon our foes; as to the breeding of plants and animals in such way as to improve the present type or produce better ones; of the ways of using the various animal foods so as to produce economically the best meat, the best milk and butter and cheese, the best wool, the best eggs, and the greatest muscular power to do our work; as to the wonderful chemical and biological processes that go forward in the sprouting seed, the growing plant, the swelling grain, the apple that ripens upon the laden bough, and the cheese that improves in lusciousness as it nourishes the millions of microbes that find within it a world to them measureless in extent.

Having marked out the scope of our college as it is indicated in State and national law and as it is understood by faculty and board of agriculture, I may say further that it is our purpose to confine ourselves to our own field. It gives us scope and verge enough. To teach agriculture in all its branches, to teach the mechanical arts in all their branches, to teach English and political economy and history as the law requires us to do, to teach the great sciences that are directly related to agriculture and the mechanic arts, to carry on a system of student labor on the farm and in gardens, orchards, stables and shops, to carry on important experiments in the many unsolved problems of agriculture and its ministering sciences, all this gives us a large, significant, and inspiring field. To this field we shall confine our work. It is not our mission to develop into a university where the whole round of classical, literary, and scientific studies may be carried on, and men may be fitted for the professions of law, medicine and theology. Ours is a very different mission—to train men for practical pursuit of the great productive industries that grow out of the cultivation of the soil, and of the manufacture of raw material into articles of use. Some of us believe that this is a field second in importance to none. Its scope is so broad that we shall confine our efforts within its bounds with no consciousness that those efforts are pent within narrow limits. The results already reached and those that the future promises are so rich and so helpful to men that we shall devote ourselves to our mission with a deep and

strong enthusiasm, rejoicing at the same time to see other important educational work carried on with success by other schools.

There is so strong a tendency among the graduates of our high schools and colleges to turn away from agricultural and mechanical pursuits that it becomes a point of special interest to inquire into the vocations followed by our graduates. It has sometimes been said by those not acquainted with the results of our work that we educate young men away from the farm. Is this so? On this point, through the efforts of our alumni association, we have kept a careful record. Statistics show that 36 per cent of all the graduates are now engaged in farming, four per cent are engaged in other industrial pursuits, and seven per cent are engaged as professors or presidents of agricultural colleges, making 47 per cent of the graduates now engaged in the line of work for which the college specially trains. There are few technical schools that show a larger per cent of graduates following the pursuits for which the schools give special training. Not many schools of law, medicine, or theology have 50 per cent of their graduates following those professions after they have been a few years out of the schools. Not a few of our graduates follow teaching or some other work until they have saved enough money to buy a farm, and then go to farming. Our mechanical course was established so recently that we have graduated but two classes from it. Of these we know that the larger part are engaged in mechanical callings. There is a demand for trained men in such pursuits.

For some years after the college was established it struggled against many difficulties. It had few buildings, little apparatus, a small library, and no experience in the work of agricultural education, for it was the first school of its kind in America. Its best friends expected more of it than was possible under the conditions; while its enemies rejoiced to magnify its mistakes and refused to see its excellencies. Happily those early difficulties have been in a great measure overcome. Through the munificence of Michigan the college has now many excellent buildings and a valuable equipment. Through the munificence of the National Government it has an annual income that goes a long way towards paying the current expenses. It has constantly improved its course of instruction until now that course is widely recognized as a very superior one, and has brought to it many new friends, while the old friends, who helped it in the days of small beginnings, rejoice in its progress, and success and honor. When we consider what has been accomplished in its first 33 years we have reason to look for honorable growth and work in the half century to come. Holding what we have won, and going forward on the same lines of development we should, within the next few years, establish a well-equipped dairy course, to give the most approved instruction in all dairy management; a veterinary course which shall give full veterinary instruction so that we can graduate men fitted to practice veterinary medicine; a school of stock-breeding, in which shall be taught, as far as known, the principles that underlie all breeding of domestic animals. Perhaps, also, a complete course of vegetable diseases, so that we may prevent or cure the blight upon our grain, the yellows which is the terror of all peach-growers, the rots that attack the potatoes, and other diseases that so often sweep away the farmer's well grounded hopes.

The mechanical department is training men to work in wood and iron. Probably it ought not to confine its work to these two materials. Work in stone, leather, cloths, and many metals other than iron should, as oppor-

tunity comes, be taught, so that all the great mechanical industries shall be represented. When the stake was driven to mark the site of the old College Hall it was driven in the midst of the oak woods. When in 1857 the college was dedicated the first buildings were surrounded by stumps and fallen trees. In the 33 years that have passed since then we have, from those early rude beginnings, evolved fields, gardens, orchards, groves, lawns, drives, many laboratories, barns and dwellings, and a most valuable equipment of library, stock, and apparatus. During all the school year we have a happy and busy population engaged in the study and the class room, the fields and the gardens, the laboratories and the shops.

Perhaps it is but a dream to expect for the next 33 years a growth proportionally as great as the first 33 years have given. But we may at least hope that we shall not stand still. We may hope that a continuance of faithful work from board and faculty, and of generous confidence from the people of Michigan and of the United States will give us continually increased power to train men bodily, mentally, and morally for the great work and responsibility of life.

HISTORY OF GRADING DISTRICT SCHOOLS.

SECY. R. A. OULVER, CALHOUN COUNTY.

The common schools of Michigan have existed under five systems of management. First we had the township board of inspectors who examined and qualified the teacher, leaving the entire management of the school to the school board. This system was followed by the county superintendency. The county superintendent was the teachers' examiner and school visitor. In his annual tour of the schools of the county he could compare the work of the different teachers, make suggestions to teachers and officers, and select by means of a thorough uniform system of examinations an excellent corps of teachers for the following year. The main objections urged against this system were: That the appointment of a superintendent was political, that the board of examiners was composed of one, that it was an expensive system in proportion to the amount of benefit derived. The rural portion of the inhabitants of our state filed their petitions with their legislators. The law under which the county superintendency existed was repealed, and instead was instituted the township superintendency, the most indifferent system of country school management so far instituted in Michigan. Many bad features of the county superintendency were retained. The appointment of a superintendent was political. The examination of teachers was superficial. There were so many limitations on the time and expense of the superintendent that in many townships the schools were seldom, if ever, visited. This period marks the decline of the common schools of Michigan. The decline was so rapid in some localities that there was much invidious comparison of our common schools with the common schools of other states under the management of an efficient county superintendency, and thus was aroused the interest and attention of school managers, leading educators, and patrons of common schools in Michigan.

The year 1881 marks the beginning of a new era in the educational affairs of the State. The State legislature at its biennial session passed a law establishing a county board of school examiners composed of three members who were to conduct all examinations of teachers, grant certificates to successful candidates in such form as directed by the State Superintendent of Public Instruction, and have general supervisory charge of the schools in the county. The visitation of schools was given to the chairman of the board of inspectors who was to work under the direction of the board of school examiners, and who was to make elaborate reports to the board of school examiners which they would naturally compile and forward to the State Superintendent of Public Instruction. Thus I have briefly named four systems of school management without entering into any details or specifications which are immaterial to the subject.

With the advent of the county board of school examiners new life and vigor was given to our common schools. A new class of men and women, who were in full accord with modern educational affairs, who were ready and willing to advance the interests by systematic effort of a class of schools which were generally neglected, were placed in management. Up to 1881 very little had been said or done about classifying and grading the great mass of pupils in our ungraded or country schools. Before the close of the year State Superintendent Cochran submitted his annual report which contained an unusually long commentation on the condition of ungraded schools. He called attention to some of the difficulties and drawbacks surrounding these schools; the shortness and the variation in length of the terms of many schools; the irregular attendance of pupils; the frequent changes of teachers with the lack of reliable information as to the work done by the former teachers; the diversity of text-books in the same school; the inefficiency of teachers; the indifference of parents; and many more of minor importance. "Prominent among these difficulties," said he, "is the lack of a proper system of grading, classification, and course of study. This defect is one of the most glaring in the management of rural schools. It involves a serious waste of time on the part of both teachers and pupils, leads to a desultory kind of work which is of little comparative value, tends to lessen the ambition of pupils by a repetition of the same work with the advent of each new teacher, begets an unsymmetrical development of the faculties, and leaves the school at the end of each term without a clearly outlined and permanent character. The introduction of a proper classification and course of study would remedy, or at least would lessen, many of the other evils to which these schools are subject. It would do much toward correcting the irregular attendance of pupils, aid in securing uniformity of text-books, check the tendency to frequent changes of teachers by rendering these teachers more efficient, furnish a healthful stimulus to progress on the part of pupils, and by affording a well-defined plan of work the school would become an organic, definite, and progressive educational power." Two other very strong points or statements were made by the superintendent. "A natural co-ordination and sequence of studies is as desirable in a rural school as in any other, and if this can be attained these schools will take a long stride in the way of progress." "The different ages and grades of pupils in the same school with its single teacher offer no insuperable obstacles; in fact the necessity for right organization becomes all the more imperative."

Acting under these statements and theories for the advancement of rural

schools State Superintendent Cochran arranged and published a four-page course of study, the essential features of which were: An introduction on page one giving reasons for its use and explaining its operation, with a final admonition to examiners and inspectors to aid in giving it force and effect in the schools under their charge. On pages two and three was arranged the course of study dividing the work into three sections, the first section comprising first and second classes, the second section comprising third and fourth classes, and the third section comprising the fifth class. Under each section the topics were enumerated with some explanation of the work to be accomplished; also, under each section were explanatory notes giving methods for teaching the different topics. The work of the first section was to cover a period of two years, and the topics were reading, spelling, writing, numbers and miscellaneous exercises which were to include language and home geography. The work of the second section was to cover a period of three years, and the topics were reading, spelling, writing, arithmetic, geography, language and miscellaneous exercises which were to include history and physiology. The work of the third section was to cover a period of two years, and the topics were reading, spelling, writing, arithmetic, geography, United States history and grammar. Thus we have seven years' work divided into three sections and the three sections subdivided into five classes. On page four was arranged a daily program for recitations and study, dividing the day into four sessions with each session divided into five recitations, allowing from ten to twenty minutes for each class. This course of study was freely distributed throughout the State. The required number of copies was sent to each secretary with instructions to distribute them among the inspectors and teachers and urging their immediate adoption and use. While this course of study was not as clear and comprehensive to the average rural teacher as it might be, it certainly deserved a better fate than was in store for it. It was rarely used. No one seemed to be ready and willing to go among the teachers and explain its feasibility, but it certainly laid the foundation for successive courses of study and opened up the question of the gradation of our rural schools which has been so freely discussed in many of our examiners' meetings from 1882 to the present time.

Following out this line of work State Superintendent Gass made further recommendations for the successful classification and gradation of rural schools, and published a course of study which differed quite materially from the first course. He added one year, making eight years in the course, and divided the work into four grades of two years in each grade, adding more copious explanations and notes and giving us a new program for recitation and study. This course of study suffered very much the same fate as the first. When tried by a few progressive teachers it was found to be excellent and well adapted to country school work, but the great bulk of the circulars were not distributed any farther than the offices of the county secretaries, and very little effort was made to enforce its adoption and use.

In 1887 the management of common schools was again changed by placing the work of visitation and supervision in the hands of the secretary of the county board of school examiners. The real work of organizing, classifying and grading country schools begins at this date. Nearly every secretary in the State was determined to do something for the schools under his charge, was determined to make out of the schools in his county as

perfect an organization for the intellectual, physical, moral and social advancement of his teachers and pupils as could be found in all the land.

Early in 1888 State Superintendent Estabrook published a new course of study filling a pamphlet of fourteen pages. This course was perhaps more comprehensive than anything published heretofore. The work was divided into four grades with two years in each grade. The work of each grade was fully outlined, giving much space to primary reading, language work, number work and oral geography. In addition to the usual daily program for recitation and study, there was a tabular view of the course of study which gave the teacher at a glance a comprehensive idea of the amount of work to be accomplished and when it is to be accomplished. This course of study was not distributed in the usual way, for many of the secretaries carried it directly to the schools, explaining the work to the teachers and requiring them to learn it, to use it, and report the result to the secretary at the end of the term. In addition, in most of the counties the secretaries furnished some kind of blank report on which the teacher was required to report the grades of the pupils with their days of attendance and class standing. Notwithstanding the quite general adoption and success of this course of study, and quite a little success in grading the schools, a number of boards of examiners were not satisfied with it, and before the end of the year they were publishing and distributing a course of study and manual of their own, embodying many of the excellent features of the State course of study, but dividing the work more explicitly into grades and giving more elaborate directions for its introduction and use. At the examiners' meeting last December and at subsequent meetings held early in 1890 there were no subjects more faithfully presented and more earnestly discussed than the State course of study, the gradation of pupils and a system of reports for county schools. From these discussions the following points were gathered:

1st. It is useless to attempt to organize and systematize the schools of a county without a uniform course of study, and that the work of the course should not extend beyond a period of eight years.

2d. The adoption of a uniform course of study naturally precedes any attempt to grade the schools, and that the gradation of the schools naturally and readily follows the adoption of a uniform course of study.

3d. The gradation of the schools cannot be made perpetual unless each school is provided with some kind of a perpetual class record, which is handed down from one teacher to another as there are changes in teachers, and unless duplicate copies of pages in this class record are filed with the secretary at the end of each term; in other words, unless the secretary has a complete registration of pupils and follows them through the entire course.

4th. The very reasons given for objection to the establishment of a uniform course of study and the gradation of the pupils in our country schools, viz., frequent changes of teachers, irregular attendance of pupils, want of interest in the work by both teacher and pupil, are generally overcome by establishing a uniform course of study and grading the pupils so that each pupil may know how much he has accomplished, and how much he will have to accomplish before he completes the entire course.

At the suggestion of State Superintendent Estabrook at the last annual meeting of examiners at Lansing a committee of five secretaries was appointed to work under his direction in the preparation of a new State course of study and manual which would embody nearly all features sug-

gested by the different secretaries and meet the wants of the country schools throughout the entire State. This committee labored hard with the co-operation and assistance of the State Superintendent and the result was the publication and adoption of the course of study and manual now in use in most of the counties of the State. This manual and course of study is a neat little publication of fifty-two pages containing an excellent introduction by State Superintendent Estabrook, a short explanatory preface by the committee of secretaries, the course proper with a topical presentation of each year's work and with quite elaborate explanations and notes on each topic. The tabular view of the course of study and model daily program together with a list of helps for teaching the various branches, are found on the last pages of the pamphlet. A large share of the space has been given to the subjects; primary reading, language, numbers, and oral physiology and hygiene. Simultaneous with the introduction of this course of study there was introduced in many counties Welch's Class Record. Welch's Class Record is as its name implies a complete record of the class work of each pupil during the entire course. Duplicate pages of the record are furnished to each teacher upon which the teacher at the end of the term is to report to the secretary the true condition of the school and school property. We also have on hand a few of the first and last pages of the record, the course of study, and full directions how to keep the record and how to grade and classify a school. As I have indicated, their system is now on trial in nearly all of the counties of the State. We can only prophesy of the result from our experience in the past. In conclusion, perhaps it will not be out of order to give per ensample the result in one county of the past three and one-half years of county supervision where the secretary quite closely followed the recommendations and directions of our State Superintendent with regard to the use of the State course of study, the classification and gradation of the pupils and holding local teachers' meetings. On the first visit of the secretary to the schools, all the conditions named in the reports of our State Superintendent in his commentation on country schools were found. There were frequent changes of teachers; not more than fifteen in the entire county were employed by the year. Not more than five schools were using any kind of a course of study, or making any systematic effort to advance the pupils. The attendance of pupils was irregular, and their promotion was at their own option instead of the option of the teacher, and many times was based upon books purchased instead of the amount of work accomplished. The terms of school were very irregular in length and season, when held; some of the schools running through the months of July and August. The diversity of text-books in the same school was so great that in the county at large there were more different text-books than there were schools. Today, after three and a half years of quiet management and the limited amount of visitation we get in the larger counties, with nearly 160 country schools, we have 97 schools which employ teachers by the year, and many more schools which employ the same teacher a second term if he gives satisfaction during the first. Many directors say they find it almost absolutely necessary under the present system and arrangements to employ successful teachers as long as they can. Of the whole number of schools, sixty are well graded, about thirty are partly graded, and the rest are indifferently graded, all depending upon the efficiency of the teacher and the co-operation of the school board. The school terms now generally begin with the school year and terminate at the end

of eight, nine or ten months. The average length of the school year in this county has increased about five per cent in the last two years. Perhaps the text-book questions can never be settled, yet with existing laws I can see no pardondable excuse for a diversity of text-books in the same school.

Members of the association, the work has only begun. A great field of labor lies before the school managers of Michigan. To perfect and systematize the common schools of Michigan with all the intricate machinery of their management is not the work of a day, of a year, or of a decade, but is the work of a lifetime. Although most of you may be engaged in high school work, or college work, we need your support, your co-operation. If our high schools and our colleges must have pupils, from whence must they come? You know better than I that there has been nothing that has so retarded the rapid advancement of many of the pupils in our high schools as the erratic work in our common schools. And, if such a large percentage of our children never attended anything but a common school, with how much interest, attention, and self-sacrificing zeal should the management and instruction be guided?

GRADING OF THE COUNTRY SCHOOLS—THE OBJECTS TO BE GAINED.

SECY. ORR SCHURTZ, EATON CO.

Whatever the school with which we have to deal may be, whether located where the population is dense or scattered, the conditions and surroundings favorable or unfavorable, the people in sympathy with advanced notions, theories and methods, or opposed to them because of cherished customs and traditions, because of apathy and indifference arising from long continued stagnation, or wrong notions of economy, all agree that there is one great object to be kept before us to the exclusion of all else, namely the highest and best results attainable under the circumstances, results commensurate with actual expenditure of time, money and vital energy, results commensurate with demands put upon them by the town, by the city or village, by the state, by the nation. The times and the condition of affairs toward which this nation seems drifting demand preëminently that these schools of today shall furnish sound-minded, well-balanced, right-thinking and reasoning men and women, men and women whose training in the schoolroom shall have been of that well-rounded, symmetrical development that shall equip them for the highest, most useful citizenship, that shall enable them to view from all sides, and decide intelligently, the great questions of government constantly arising.

I think, therefore, I am safe in laying down the proposition that in dealing with the district schools we must ever keep before us the ultimate result that should come out of them, and that methods, arrangements and systems, whatever they may be, should be such as shall most expeditiously, economically and thoroughly bring about such results. Now, I take it, the education we aim to give the country youth does not, or should not, differ

from that given the city or village youth, up to a certain state of advancement, at least. They pursue the same studies, and the ultimate results aimed at are identical; both are to be trained to intelligent, useful citizenship, capable alike of administering the laws and of yielding obedience to them. The country youth stands quite as good a chance as the city youth of rising to positions of trust and honor in local, state and national affairs. There is no distinction of class or caste. If, then, they are educated for the same functions as citizens, why is not that system of education which is conceded to bring the best results in the one case the system that will act likewise in the other case? If careful supervision, organization, gradation and classification are essential to one school in a county, why are they not equally essential to every school in that county? Why should the boys and girls who happen to live in a city or village be carefully directed as to what they shall study, when and how regularly they shall study it, while two miles, five miles, ten miles away boys and girls are left to their own caprices in these matters? If it is necessary in one school that the teacher shall know what she is to teach the first month, the second month, the first year, the second year, why is it not equally necessary that the teacher in the second school know these things? If it is best that the former should be subject to certain requirements in organization, methods and school-room management, in making and preserving records of classification of pupils, why is it not best that the latter should be subject to the same requirements? On the other hand, if lack of system, want of uniformity, an utter disregard of correct methods and business principles are a good thing for the one school, why are they not a good thing for the other? I might sum the matter up, in answer to the question, What are the objects to be gained by grading the country schools? by answering, the same that are to be gained by grading the village or city school. I do not mean to say that the same sharp classification can be had as in the city schools, at the present time, at least, for elements enter into the problem of country grading that we do not have to deal with in city grading, but that a carefully arranged course of study can be strictly adhered to in the country schools cannot be successfully controverted.

A few things are absolutely necessary in order to grade the schools of a county:

1. A carefully arranged course of study, such as we now have.
2. A permanent classification record in each school, showing the various grades, and the work accomplished each term by individual classes and pupils. In connection with this a system of reports to the county secretary.
3. Regular promotions from grade to grade, under the direction of the secretary.
4. Thorough supervision by the secretary. This means a man who will devote all his time and energies to the work of supervision, who will organize his teachers, lead and direct them in the general plan of the work, counsel and advise them, and meet them at institutes and associations. In a word, it means that the secretary must be a superintendent in the highest and best sense of the term.

With these few essential things—and they are no more essential here than wherever grading is in force—carefully attended to, there can be no such thing as failure. Given these essentials, and one is just as certain of

success in country as in village schools. Without them you cannot grade the largest city schools. With them you can grade and classify any country school.

The advantages that must necessarily follow are:

1. Uniformity in methods and amount of work.
2. Economy of time and fewer classes.
3. It forces the careless teacher to study her work, and places her upon record.
4. A new teacher can take up the work of her predecessor at the point she left off, and is prevented from turning pupils back.
5. It induces pupils to study the branches in their proper order.
6. It compels pupils to study a branch until they have completed it, and prevents pupils and parents dictating to the teacher as to what each child shall study, and when he shall study it.
7. It leads to the employment of teachers by the year instead of by the term.
8. It brings about uniformity of the schools of a county, and thus enables the secretary to supervise them most effectually.

In the means here suggested to accomplish grading there is nothing radical, nothing new. The results promised are such as may be reasonably expected, and such as have been accomplished among these schools in other states. The same means have been, and are today, employed in about five hundred graded schools in Michigan. They are simple enough, but their influence cannot but be felt and seen in these district schools, in the increased usefulness of the teacher and the result of her efforts. Persistently carried out this course will bring order and system out of what was before confusion and chance. It will economize time, money, and labor. It will surely bring about most gratifying progress in these schools.

An authority has said, "If supervising schools means anything, it implies familiarity of the management with the room, methods, discipline, and the means and character of instructions. It means counsel and criticism." Certainly nothing can be truer. Think, then, of a secretary's attempting to become familiar with management, methods, discipline, means and character of instruction of one hundred and fifty separate schools scattered over an entire county, unless there is laid down for these schools some general scheme of work which all are to follow, unless common methods are used to carry out these plans, and unless there is in each school some record that will show the supervising officer to what extent each teacher is prompt or remiss in the discharge of duties.

Some people imagine that because the schools of a county are separated by so many miles that they are, therefore, absolutely independent of each other, and may, with perfect impunity adopt means and methods out of all keeping with the latest and best theory and practice. Experience gained from more than three years' continuous and most arduous efforts to build up an efficient system of school work in one of the counties of this state, and to some effect, leads me to declare that the man who entertains such a notion knows absolutely nothing about these schools, or else has not learned his A B C's in school supervision. As well claim that because you live in your own house you are independent of the community in which you live. There is no such thing as individual independence for pupil or

school or teacher. One school cannot be independent of the other schools of a county. No more can one teacher be independent of his fellow teacher. If there were no changing of teachers from one school to another, no breaking in of new teachers, there might be such a thing as independence. A certain teacher goes into a school for two, or four, or six months, as the case may be. She has no idea of method or system. She has no idea that to get even fair results the work must be carefully laid out for this week and the next, for this month and the next, that each step forward should naturally grow out of, and connect itself to, the ground already traversed. So, blindly, aimlessly, and to little purpose pupils are hurried through books and actually trained to be listless, superficial, illogical, unstable in all that they think and do. Now, let another step in and take charge of this school. Her methods may be the best. Her work may be carefully, systematically planned and carried out; but she must fight her way step by step. Pupils and parents have been accustomed to weak, purposeless teaching and fruitless results until they have come to look upon these as the proper order of things. A large measure of vital energy must be wasted in rooting out the tares previously planted, and in preparing the soil for proper sowing and cultivating.

There is but one way to avoid all this: Make the work for all the schools of a county the same, and compel every teacher to follow the general plan of that work. But some one cries, Oh, the individuality of the teacher! What is to become of that? The experienced teacher should, and does, have unlimited scope for originality and individuality under a system of grading. The novice has no business to be original or individual in teaching. The course of the country school in the past has been individuality run mad, and originality, as to its uniqueness, its deformity, its outrageousness, marvelously unlike anything in the heavens above or the earth beneath. Talk about individuality for one who steps into a schoolroom to teach for the first time, never having given a moment's thought to the matter? Time enough for individuality when he has learned the merest rudiments of teaching; then let him begin to exercise it. Until then, let him follow carefully in paths already laid out for him by those who have previously had costly experience in this same kind of individuality. This the graded course of study will accomplish, and is accomplishing, and it will be many a day before the alarmist will find too much system in these schools.

GRADING OF RURAL SCHOOLS.

OBJECTIONS AND DIFFICULTIES CONSIDERED, BY SECY. C. L. BEMIS, IONIA.

As I understand, to the grading of rural schools there are no objections, but there are decided objections to not having these schools graded. There being no objections with good foundations does not remove, however, the difficulties we find in going out into the field to work.

Perhaps it would be wise to consider for a moment a graded course of study. Mr. Pickard, a former superintendent of the Chicago schools, says; "The elementary school teaches neither a trade nor a profession, but lays

the foundation for the acquisition of either, as the future purpose of the child may develop itself."

The purpose of the school is the intellectual and moral training of the child. The course of study is made with a view to intellectual growth with the idea in mind that the moral nature is to be reached and developed partly through this course of study, and partly through the one who uses the course of study in the development of the intellect. While we talk, then, of a course of study for our schools, we should not forget to say something of what is required in the proper carrying out of the course.

In preparing a course of study for children there are three things to be considered: The kind of work, the order of arrangement, and its use as a means of development.

The work or the studies to be pursued should be of a kind needed in laying the foundation for the acquisition of either a trade or a profession. The order of arrangement should be logical and with a view to the right development of all the mental and moral powers. The kind of work and the order of arrangement constitute the graded course of study. Its use as a means of development should be thoroughly understood by all teachers. A thorough course of study with a truly moral teacher who understands its use, and children to take the course, constitute a graded school. If these essential elements are secured and all work in harmony, there will be but little doubt concerning the prospects of the future man.

Although I can see no objection to grading, there are men of good judgment who seem to see real or imaginary objections. We expect men to object who know but little of educational matters. Most people are conservative and think that the schools should be taught as they were in their childhood; and when anything new to them is presented it is looked upon with suspicion. But sometimes we are surprised to find such men as Mr. Pickard saying that "in rural schools a course of study can hardly be adopted that will prove of value." This I know is not true, because we have several rural schools in Ionia county as thoroughly graded and working under as thorough discipline as many of our city or village schools.

Mr. Pickard seems to come to this conclusion by observing that the time of some pupils is not at their full command, attendance upon school must be irregular, and the early advantages of many have been limited. He makes the graded course of study like an inclined plane upon which every step forward is a step upward. Now we can work a course of study upon this plan in a rural school better than in any other, because as a general thing, there are fewer pupils and more individual attention can be given; also, because the plan of the rural school is such that one teacher can take the child through all the grades. That one teacher does not do this on account of frequent changes in teachers is no objection to the grading. It is, however, an objection to the way it is carried out; and is one of the difficulties we have to encounter. To overcome this difficulty is largely the work of the secretary or superintendent. As the course of study is for the right development of the child, even though his time is not "fully at his command," "attendance upon school irregular," and "his early advantages limited," whatever he has done, either in school or by coming in contact with the world, is a part of his education, and it has taken him to some point in the inclined plane, just as his early training from infancy to six years of age has done. Now it makes no difference whether the school in which he enters is graded or not, he can reach no higher point. He will naturally step on to this plane at a point as high up as his mental

vigor will take him. A boy at twelve who has never been to school will go up more rapidly than one at eight, everything else being equal. The advantage of entering the graded school is that the object is the development of all the powers, while in the ungraded schools of the country no such attempt is made; consequently no thorough foundation is laid for future usefulness. In the graded school the child strikes a system of training, the tendency of which is to broaden his views and give him larger and more exalted ideas of things about him, a system, too, which is to lay a right "foundation for the acquisition of a trade or profession."

In our rural schools, under the ungraded system, the child has made his own selection of means to prepare himself for future usefulness. This is allowing a child to try to prepare himself for something that he knows nothing about, a thing that is absolutely impossible. All we propose to do in grading is to require children to study those things that are necessary as a foundation for any of the trades or professions likely to be taken up by man, and to place him under influences that will give him a good moral character.

All this can hardly be expected in an ungraded school. The moral teacher might be secured, but the kinds of work would be so limited that the child would lose the systematic training and the moral lessons that would naturally come in with the variety of work in a graded school. In order to do all that we propose to do in grading the rural schools we must make them the primary schools of the country. They must stand in the same relation to the high schools that the high schools do to the University and the colleges. The amount of discipline received in these schools must equal that received in the city school in passing the first eight grades. To this some of our superintendents object. The objection is, simply, it can't be done.

For years pupils have entered the high schools of the State with no other preparation than that required in a rural school; and this, too, with no special effort on the part of any one to make them preparatory schools. I have watched these pupils' progress through the University, the colleges, and out into the world. I have seen them drop out of the courses all along the line, and it is generally thought that they take up the trades or professions with no less credit to themselves than those who have gone through the regular course of a city school. There is this difference, however, they are generally older when they are through school and have to work at a great disadvantage in all school work. This difference is due to a lack of systematic training in childhood, and it is one of the things to overcome by a systematic course of study in our country schools. If pupils have entered the high school from the country school when no effort has been made to make them preparatory schools, how much better will be their higher work, when trained in these schools through a systematic course of study, under careful supervision, with these higher ideas in view. All the city and village schools do not reach the standard required by the University, and undoubtedly it will be years before they do. The same will be true of the rural schools. It will take a great many years to put them where they may be put by earnest, hard work. The hardest work for those who have the grading of schools in hand is to meet the objections in the fields. Here they come in contact with those who know little or nothing of educational work, and this is found not among the patrons alone but among the teachers as well. These people can readily see that improvements are going on in other fields of labor, and they are satisfied

that these improvements are what they should be, but when they see or hear of a change in educational matters they seem to have been asleep for fifty years, and are surprised and shocked to think that schools are not the same as they were before they commenced their dreaming. It is hard to meet the objections here, because it is next to impossible to get a piece of logical ground large enough for both to stand on.

I understood that the director in one of the schools objected to grading. I went to see him, explained it as well as I could, and came away. He came to the institute and heard more about the grading. Shortly after he was at an examination as a spectator, and having some time I asked him what he now thought of grading the schools. He said that he thought it was all right, and that when I was talking with him at his place, he knew nothing about it; and he said, "You know that an ignorant man is the meanest kind of a man to get along with." I have had people object to my being secretary because I was trying to grade the country schools, and thus be a means of increasing taxes. While lecturing one evening on the subject of grading, one man said, "When you get these schools all graded and know just how many there are, you will then give certificates to only enough teachers to fill the schools. These we will have to employ and pay them what they have a mind to ask. For that reason I object to the grading." I asked him where he got that idea, and he said, "It is talked around." I told him we would not have to wait until the schools were graded to find out the number; we know that now, and have known it for years. If reducing the number of teachers was my object, I could have finished that at the end of my first examination. I told him that we now had two teachers for every school, and asked him how he could think we were going to make their number correspond to the number of schools in the county. "Well," he said, "we don't know what will happen in the future."

One day I talked with an editor, one of that class of men who have everything in their papers and hence are expected to know everything, but who could not see how we could grade the rural schools on account of the expense of making extra buildings and employing more teachers. One man did not want to express his opinion in favor grading because he did not know how it might affect taxes. A chairman at one of the meetings held for the purpose of discussing the graded system did not want to put the motion, "that it was the sense of the meeting that a thoroughly graded system would be a great benefit to our schools," because he was afraid that it would bind the district to grade the schools, and as many of the taxpayers were not out, he thought it would not be the proper thing to do.

Another objected to grading because "it would call for a change of books. The schools could not be graded with the books they now had, and he believed that the whole graded system was a scheme for putting money into the pockets of the booksellers."

I might go on and give a great many examples of a similar kind, but these are enough to show that the people generally do not understand what a graded system is. I have found out, however, by experience, that when they really know what it is they are strong in its favor.

The method I take to remove these little objections is to use the press freely, give evening lectures on the subject, and have a county school officers' association. In this way all the objections are wiped out one after another, and now, after over three years of hard work, I can scarcely hear of a person who is not in sympathy with the movement.

At the beginning there were just as strong objections to it from the

teachers as from the patrons. They thought they would not have time to do the work. They had all the classes they could attend to now, and what would they do when they were graded? When told that grading would diminish the number, it was doubted; and before it could be impressed upon their minds I had to take two or three schools, the teachers of which were willing to try an experiment, and put in a graded course with program, and work it for a year. After it had been tested and the teachers testified to the fact that it was all right, others came over rapidly and now all the teachers are very enthusiastic in grading.

The institute helped me more than anything else to get the schools on their present firm foundation. Here instruction was given in text-book matters, in theory and art, and in grading. A large majority of the teachers had no means of getting instruction in the last two other than through the institutes. Many teachers have told me that they could have done nothing without the institute.

One of the greatest difficulties in carrying out the graded work is the too frequent change of teachers. Teachers are changed many times for no reason at all. School officers say that they did not know that the teacher was going to teach, she had made no application. In other kinds of business men don't manage in that way. If a farmer has a good man at work for him, he tries to keep him as long as he wants help. Other business men act in the same way.

The grading of our rural schools requires supervision, and any action against it is in the end the down-fall of systematic work in these schools. That they need supervision seems to me to require no discussion, but there are many who claim that the schools have done good and thorough work without a superintendent—hence he is not necessary. This, in my judgment, they claim without having given it due thought, and knowing but little about it.

Who would say that a corporation employing twenty-five or thirty men can do successful business if each man works by himself, being his own superintendent, and paying no attention to the others who are working with him to accomplish the objects expected by the corporation? The object is, perhaps, to make mowing machines. If one man goes off by himself and makes little wheels, another pinions, another small shafts, and so on through all the parts of the machine, having no superintending mind to see that they are made to perform their function in the machine of which they are expected to form a part, what kind of apparatus would we have?

Yet this is what we have had for years in our country schools. The object here is to make good citizens, men and women of character, men and women who will be valuable workers in the great commonwealth, men and women who by their strength of mind and character will help to make this nation the nation among the nations of the world. Can this be done if each teacher goes into a school by himself and during his short term rides his prancing hobby for his own pleasure or benefit?

In order to turn out perfect men, men who are "to live for their own highest well being and happiness," and at the same time be prepared "for the right discharge of all the obligations and duties which spring from their relations to their fellows, to society, to the State and to God," there must be a single mind directing other minds working in harmony. The supervision cannot be a success unless the superintendent remains in his office long enough to carry his ideas to a point where something can be

realized. How disastrous it would be to a business concern if at the end of each year a new superintendent were employed who would tear out the machinery, put in new, and get ready to do the work in a new, and to his mind, a much better way. This is not to be the case in business, because it would not be allowed by the members of the corporation, but where the child's mind is the thing to be worked on, many think it is of very little importance how often everything is overhauled. If, then, the superintendent should remain in office a number of years it would seem necessary that great care be taken to secure a person who will be apt to be a success. This cannot be done if men are chosen from the rank and file. They should be chosen on account of qualification for the work.

The city superintendent is expected to be a scholarly man, well versed in the methods and the science of education. A large share of his time is given to the grades below the high school, the exact work required of a superintendent of county schools. Should our country school superintendent, then, be chosen without reference to his qualifications, while a city superintendent can get his position only on the ground of his being thoroughly qualified? I, for one, am strongly in favor of an educational qualification required by law for all candidates for the office of secretary of the county board of school examiners. This qualification should be scholarship, knowledge of methods and the science of teaching, and ability to teach, as shown by years of experience. He should be a thoroughly moral man in every sense of the word, have a thorough professional spirit, and he should have the energy of a steam engine, and an ambition to keep it continually active. His work is much harder than the city superintendent's. He must be constantly in the saddle and ready for active duty. Such a man can greatly benefit the schools of his county and be a means of removing objections and overcoming difficulties of all kinds in educational matters. By having these qualifications he will be able to instruct both teachers and pupils, and gain the confidence of patrons of schools. All this can be done at institutes and associations. By thoroughly working them up, large numbers of teachers and patrons will be brought together and instructed in things that are necessary to know in order to thoroughly systematize school work.

I think that the present way of appointing the secretary is the proper one. He should be kept as free from politics as possible. The only requirement should be that he be a man qualified for the place, a man who in the place will do the work as it should be done, for the benefit of the children, without regard to time, money, or personal inconvenience. If he meets these demands he should receive the position whether he be a Democrat, Republican, Prohibitionist or what-not; these cannot qualify nor disqualify him for the work of superintending. I am thoroughly convinced that we are working in the right direction. The only way to educate the people is to educate the children; and the children are educated in the primary schools. This work will be hard, it will tax all our powers, and we will meet with a great many difficulties. It is ours to overcome these difficulties, to outride the storms of the present, that in the future we may sail on the surface of a peaceful sea.

Let us, then, be up and doing,
With a heart for any fate,
Still achieving, still pursuing,
Learn to labor and to wait.

DISCUSSION.

Prof. DANIEL PUTNAM said:

At the meeting of this association held in December, 1883, I read, by request, a brief paper on the "The Grading of District Schools." The topic of discussion today is the same. The district school is the country school. In that paper I ventured to say that "even in Michigan this is the school problem which more than any other, or indeed all others, remains to be examined, and, if possible, to be put in the way of some fit and speedy solution." I find, on reviewing the utterances of seven years ago, only a few points which I would care to change. I might be inclined to emphasize a little more the matter of grading as distinct from simple classification, and to indicate its obvious advantages.

The end in view was stated to be, "That such a state of affairs may be secured that the pupils of a school shall follow, from the beginning of school life, a regular and consecutive course of study and instruction." This was not, by any means, a complete statement of the objects to be gained, but it was sufficiently full for the purpose then immediately in hand at that time.

Any advance movement affecting the rural schools will always be a slow one, sometimes discouragingly slow. But some progress has been made during the last seven years, though not as much as some of us hoped would be made. Two things, at least, must be secured before the country schools can be properly graded. These, with some others, were suggested in the paper already referred to. The first is "A regular and authoritatively prescribed course of studies;" the second, "efficient supervision." Good teachers and good teaching are, of course, indispensable, but good supervision will help to secure these in the country schools as well as elsewhere.

Considerable progress has been made towards securing regular courses of studies. The course prepared by the county secretaries and recommended by the State school department is a most excellent beginning. Experience in other States has proved that country schools can adopt and follow such courses. There are difficulties in the way, but they are not insuperable. This has been clearly shown in the paper just read. It may be true that in the district schools, for the present at least, the grading must allow considerable room for the exercise of wise discretion on the part of teachers and supervisors. A good deal of flexibility, in some directions, will probably be necessary. The graded system everywhere requires this. Wise regard must be had for conditions and circumstances, for individual peculiarities, and even for prejudices and obstinacy. It will be necessary, very likely, to make considerable concession in some cases, to unreasonable conservatives, to an over-estimation of the value and sacredness of old things and old ways and methods, and to the most unnatural suspicion with which many minds look upon everything new, and especially upon any proposal to change the arrangements of a school system which has unfortunately been regarded, in some quarters, with a most extraordinary degree of respect and veneration.

It is easy to fret one's self over this conservative tendency, but it is unwise to indulge too freely in the spirit or language of denunciation. Men are seldom converted to the right by vituperation and abuse. There is need here, as in all works of reform, of that divine charity "which thinketh no evil, which suffereth long and is kind."

It is agreed by all, or nearly all, who have given attention to the matter, that the great number of small school districts is one of the most serious obstacles in the way of progress and improvement in the country schools. With only some slight exceptions, the district board of each district is an independent body. The courses of studies, to which reference has been made, must be adopted by the board in each district in order to become legally binding upon the teacher and pupils of the district. If the whole township formed a single district, governed by a single board, the work of grading the schools would be very much easier. In that case regular and uniform courses of studies and uniformity of text books could be secured with little difficulty in all the schools of the township. Or if the county board of examiners and the chairmen of the several township boards of school inspectors were authorized to prescribe courses of studies and text-books for the county, uniformity would be secured over a larger extent of territory. With us the county seems to be a convenient, if not a natural, unit of school organization and supervision. There are grave reasons for doubting the wisdom of State uniformity either in studies or text-books. This is not the time for discussing that question, however, and I desire to say only so much as this: there is serious danger in carrying centralization too far in the organization and management of schools as well as in other affairs.

If a living and continued interest in the schools and school work is to be felt and kept alive in any community or neighborhood, something of the management and control of the schools must be left to the people of the locality, something more than

merely the voting and paying of the taxes necessary for defraying the running expenses. The power thus left, may, in some instances, be very unwisely used; but so also may power lodged anywhere else be used unwisely. How to distribute power to the best advantage is a problem not yet satisfactorily solved.

Some one may very likely be inclined to ask, what bearing has this on the matter of grading country schools? Just this: It will prove better in the long run, that the adoption of courses of study and the authority for grading the schools should come from the people, or from the local officers of the various districts. The people will feel that this work of improvement is necessarily their own. They will value the results more than they would if the matter had been forced upon them by some outside and distant authority. There will be less danger of a reaction which will sweep away everything that has been gained. The process of improvement by this method is slow and frequently discouraging; but when it comes, it comes, to use the cant phrase of the times, to stay. The township district, which seems necessary to the completeness of a graded system of country schools, will be secured, by and by, in this slow and tedious way. Massachusetts secured the township district system by this method. The law, for many years, only gave the townships permission to abolish the small districts and form a single one of the whole township.

Such a permissive law is all that can be wisely asked for in Michigan at present. Such a law would be better for us than a mandatory one, for several years. Public sentiment upon educational affairs, especially if somewhat radical changes are involved, is of very slow growth. An abundance of time must be granted, and long patience must be exercised. There is no occasion for discouragement. The country schools will have regular and complete courses of study in the near future, I have no doubt. They will have a system of grading, allowing a considerable degree of flexibility. We shall secure, or our successors will, the township district. All these things will be had after some time and a good deal of hard and persevering labor.

SUPT. F. E. STROUP said:

If the secretaries and teachers of the rural schools will take home with them and put in practice all the systems and plans and suggestions and resolutions that are offered here, our schools will take a rapid stride during the coming year.

This association seems to be unanimous in the opinion that a system of grading is an advantage. No other subject is receiving more attention and many and marvelous are the schemes and devices proposed for its accomplishment.

The papers and discussions have shown emphatically that successful and uniform grading depends upon three vital questions.

1. Length of school year.
2. Attendance of pupils.
3. Efficiency of teachers.

It seems to me that it would be profitable to spend the remaining time we have in discussing the best methods of overcoming the difficulties presented in these three problems.

A few years ago our thinking educators looked at the condition of our rural schools and saw needed improvements in these particulars; but what could be done? There was no one to guide or direct. Every district was independent. The State Superintendent could do nothing but exhort and plead, and his voice was as the voice of one crying in the wilderness. All the State Board of Education could do was to hold the reins of confusion. But the question was discussed, our legislature acted wisely and soon Michigan fell in line and was one of the thirty states having county supervision.

All nodded assent and we were told to look for great improvements, for all states ranking high in education had the plan in some form and ascribed their success in a large degree to careful supervision. Texas says her school attendance has increased ten per cent on the school census since adopting the plan.

For the last three years we have had upwards of eighty men whose sole work has been to grade and improve the country schools, to assist teachers, remove prejudices, and create a good, wholesome sentiment.

Is it not proper that we should now begin to inquire what improvements have been made. To do this let us call a few statistics to our aid. We do not educate that we may keep statistics, but we keep statistics that we may the better know how to educate; and we should not put them out of place in our plans and efforts.

I stated a moment ago that the proper grading and successful completion of a course of study depends largely on the length of the school year.

Let us see what has been done here. During the three years immediately preceding the election of a secretary the average duration of the school year was 7.6 months; for

the three years since, it has been 7.5 months. In other words our school term has decreased three days on an average for each district.

We are told that the question is not so much where we stand as in what direction we are moving.

Another item is the number of pupils who are availing themselves of the opportunities of school. We find that during the last year reported, the school census increased 10,146, and while the enrollment in the graded schools increased 3,285, in the district schools it has decreased 4,899. Think of it! 10,000 more children ought to be in school; 1,000 less actually are in.

Again we say we are not moving in the right direction.

Another important item is the efficiency of teachers, a sentiment to retain experienced teachers and give them a fair remuneration for their services is certainly an item worthy the earnest labors of our secretaries.

The average wages paid female teachers for the last three years has been \$24.81 or 68 cents per month less than for the three years immediately preceding. For males \$32.59 or \$3.55 less.

What ought we to expect when wages come down? We ought to expect less experience and ability. Ability we can not put in figures, but experience we can, and the secretaries report that last year 2,399 were licensed without previous experience or 346 more than the year before. Every time the secretary issues six certificates one goes to a teacher without experience.

There are many comparisons that we cannot put in figures, such as scholarship and uniformity of text-books, but those of us who as principals or superintendents, have pupils from the rural schools to examine and classify, still find their education very defective many having never studied language or even geography, and many bringing books published in the fifties.

While the schools are improving in many counties, those represented by secretaries here today, for they are the men who are active and progressive, yet in the State as a whole statistics and observation indicate that the showing is not satisfactory. But, you inquire, shall we make the secretaries responsible for all this? We reply no, not all. Had we made a like ratio of improvement they would no doubt have had to take the responsibility.

Where is the difficulty? I think the people of the great State of Michigan are as intelligent a class of people as you will find anywhere, but nevertheless the great barrier to grading the schools and paying good wages is the ignorance and prejudice of school officers.

I have the authority of those of large observation, when I say that fully one-fifth of the members of school boards are practically illiterate. A young lady attends these associations and goes home determined to do better work, and demand better wages. She goes home, takes her father's horse and drives to a school. She finds the director, presents her credentials, and says she wants \$40 per month. The good district father looks at her in blank amazement. "Why I have hired men to work right out in the sun for 75 cents a day and I don't believe but teachin' is a heap easier'n that and not worth no more." What can the poor girl reply to such an argument as that, so she finally comes down \$16 per month and contracts for \$24 which is the average price, conditional that she board with the director which is the average practice.

She commences her work with instructions to grade the school. "Grading the country school!" She has often heard that expression but she does not have a very clear idea of what it means or just what to do. Queer isn't it when the secretary spent a whole hour at the last institute explaining the system? But she has absorbed enough to think grading is putting every one back in his class. So she places every one in the class where he belongs. Some are informed they must bring more elementary books, but these are worn out, and while most parents will purchase advanced books, notice sent to two or three families to get new books of a kind which the pupils have already had, will create more excitement than the McKinley bill.

One secretary told me that the only way he could grade the schools was to have the teacher keep it a profound secret. A new way to create public opinion wasn't it!

It requires courage to go into a school and try to grade it while the officers are opposed to it.

This leads me to say that the most sensible way seems to be to have more intelligent officers.

But we are told that the choice of three officers must be made from a small community, and that as a rule the most intelligent are selected. Yes, there's the trouble, and there's the reason why the township system would be an advantage. Fewer officers, more to select from, more intelligent men selected. Under this system the secretary

would not have to divide his energies so much in instructing officers concerning the needs of a good school.

The best system I have seen proposed is the one approved by the national association of Superintendents in Philadelphia and by General Eaton, the commissioner of education who gave years to the study of school systems. This is essentially the township system, with a county board of education.

This plan would place the schools under more intelligent authority, and equalize taxation, and put an end to the frequent requests to be transferred from one school district to another.

Again, no person should be eligible to the office of county secretary who does not in some way show satisfactory evidence of scholarship and good moral character, and who has not had successful experience in teaching within three years of his election.

But legislation is slow. We can have good schools with our system just as it is. After all the best systems will fail without efficient teachers.

I believe that instead of trying to add so many of the higher branches, as recommended by the Illinois course of study, we should give more attention to and do better work in the primary grades. The large majority of youth is in the first four grades. How many rural schools still in Michigan where the little people read and spell twice a day, and have absolutely nothing else to do, but sit quietly in their seats and silently wait for instructions to return home.

What would statistics show if we knew how many children are out of school because they found nothing in their school life to interest or instruct them?

If first-class work could be done in our primary grades, the children would find time for their work out of school hours and the attendance would become more regular. In a few years the school would be graded, and gradation carries with it the idea of completion. Examinations and graduations are no longer an experiment in our district schools and they furnish a powerful stimulus for good work. Let the secretaries make great efforts toward strengthening the weak points of our system. Let them be men capable of leading, directing, encouraging, broadening, and strengthening the community in which they live.

It is now a time of general prosperity. Forest, field and mine have responded to the touch of industry and yielded their millions of treasure.

Let the common schools, the defense of the nation, keep pace with this material prosperity.

Supt. C. G. WADE said:

It seems to me that the chief difficulties in the way of grading country schools are, after all, found in the teacher.

We read, "As the teacher so the school," and must admit that in this matter of grading, it is almost entirely true. Then if the teacher has not the course of study clearly in mind and his mind clearly in favor of its application how can his school be graded?

Perhaps the first thing in teachers that prevent their grading their school is lack of interest. They either know much too little of the advantages derived from such an action or else expect to close their career as a teacher so soon as to care nothing for the profession's highest good. They teach only one term in a place, expect each term to be their last, and generally are not disappointed in the first particular at least. This class consists of young men who teach during college vacations as a stepping stone to some chosen profession and young women who teach as a sort of preparatory step to entering voluntary servitude. Such teachers do not work toward grading schools. They do not advise pupils in the selection of studies; they do not see that a boy with 5th grade No. work has also 5th grade language. They do none of these things because it seems a trifle harder. And it is quite possible for one term by such a teacher from inattention to details to undo the work that has taken the nerve and energy, for two or three terms, of men and women who like to see a school in grade line.

One pupil can't see anything in grammar and is allowed to drop it and place his entire energies on arithmetic, forcing himself ahead at one point and dropping behind at another. Thus almost before the sound of the skirmish fire that graded the school has died away it is back into its old condition. Before the country schools can be brought and kept in grade line this class of Jack-at-a-pinch teachers must be educated into or eradicated from the ranks which they disgrace. It is not a high motive, but would it not be well for the county secretary to argue with this class with his hand holding their certificates behind him?

Then there is another class of instructors who would really like to grade their school but have not that knowledge and tact which brings it about. They either go in with "sounding brass and tinkling cymbal," "See us grade your school" or else have not the knowledge to do it.

We had in Gratiot not long since an example of this kind. A teacher received from the secretary, register and manual with the request that she move her school into line as rapidly as possible. She was a conscientious girl and at once wrote a note to her director desiring him to call a meeting of the board and change the text-books throughout so that she could obey orders. It takes a district school teacher to appreciate the full size of this blunder. She unwittingly stabbed Cæsar in his most sensitive part. The board did not obey promptly and the school is not yet graded.

Commence in quite another way. Instead of saying in school A arithmetic, say eighth grade arithmetic. Place it so in your program and carry the idea all through the school. Soon the pupils will take pride in their grade and you will see them write their names followed by their grade on their slates and in their books. They will talk about it at home and soon parents and children all will talk it. Then make your grade lines straight and firm and the question is solved. Then you can use it as a leverage to induce pupils to take distasteful studies which they ought to have. Then by using tact in advising pupils what studies to take you can make and keep your school graded.

Of course it will not be all a path of roses. Some spine must be used; but after all it is that kind of a spine which firm in its convictions and intense in its purposes moves in a way to meet the least resistance. The man who goes into a school and holding his course against all resistance makes it move in a right line deserves admiration. That is talent. But the man who not only makes it move right but makes it want to move right deserves greater credit. That is tact.

Then to grade a district school requires at least three things in a teacher:

1. A deep interest in the thing to be done;
2. A clear knowledge of the thing to be done; and
3. A persistent spine guided by tact which does the thing to be done.

Horace Greeley says, "The way to resume is to resume," and a new proverb give I unto you: The way to grade the district schools is to grade the district schools.

Sec'y E. A. WILSON said:

Mr. President, Members of the Association—The excellent papers of yesterday covered the ground so carefully, the most I can hope to do will be to emphasize what has already been said, and give a rambling talk on "grading and classification." I can hardly agree with the speaker preceding me. Every grade instead of being loosely classified may be as closely classified as in any village or city graded school, and it is a mistaken idea that persons unacquainted with the work have concerning classification and gradation in the country schools.

As a rule there are not over five grades in a school, possibly six in a few, hence there are twenty-one or twenty-two classes instead of forty or forty-two. Admitting the statistics concerning wages, attendance, etc.,—the same retrograding in wages, attendance, etc., is true concerning our city and village schools if taken for the same period of time, and these schools are working strictly on the graded plan.

The gentleman's argument from Midland falls to the ground so far as the district schools are concerned, in assuming that the district schools are graded as yet or even have been for the past three years; circulars have been sent out bearing upon the subject but never before the year 1890 in this state has a practical system been introduced. The present one may be considered a success, if we judge from results obtained.

No attempt has ever been made in Lenawee county previous to the present time to grade the district schools, at least by any systematic plan, and the good effect is already being felt.

I am not here to advertise any publishing house, but I believe the work published by W. M. Welch & Co., and indorsed by our State Superintendent, is the most practical of any; it does not revolutionize any system in vogue but enables the pupil to see his position in his work as well as the teacher, then the duty is plain. As a rule the average teacher must have a text-book showing just what to do and how to do it, hence the benefit of the course of study. Having the classification register the pupil is not turned back every term; the results following such a system are excellent. It brings the district school into closer relation with the high school and this fact alone is a great incentive for pupils to advance farther than they otherwise would. As it is at present two or three weeks are spent at the opening of every term finding out where pupils belong; thus valuable time is lost. By having a reporting sheet, at the end of the first and last months of the term, the secretary is enabled to give his attention to those schools requiring it immediately.

Hon. George A. Walter, Secretary of the Board of Education of Mass., says:—"Schools having no course of study are imperfectly graded, and they are well graded in proportion to the vigilance of school officers in holding the teachers to the prescribed course

of study, and to the examinations in passing over the work, and that one year in six is saved even by an imperfect grading."

J. C. Shattuck, Superintendent of Public Instruction of Colorado says:—"Believing that the schools will be controlled in the future as they have been in the past by a shifting process of inexperienced teachers, the system commends itself as reasonable and important."

One half of the failures is caused by teachers having no system, no method. The system tends to develop the powers of the mind uniformly; the district schools fail here, as one writer says: "Pupils are going to seed in Arithmetic, and to weeds in language" Where a pupil is studying fractions there is a certain amount of language needed to secure a thorough, well balanced education. If physical development depended on the schools we should see our pupils going around with one arm developed like the arm of a blacksmith, and the other hanging limp at the side. Some teachers attempt to do too much hence there is a lack of thoroughness. Inexperienced teachers attempt to do double what others do hence there are stultified powers. Child life is like plant life, it grows not by the amount of earth, air and moisture that can be poured or heaped upon it, but by the amount it can assimilate. A school is imperfectly classified or graded; (1) If there are more classes in any one branch than necessary. (2) If a pupil is not assigned to classes he ought to pursue. (3) If pupils are not in classes where they belong.

The system secures efficiency, economizes time, systematizes work, stimulates to effort and in fact, secures the greatest good to the greatest number. It makes unity of work, gives a pupil credit for work done, and if he moves to other districts entitles him to enter his proper class and grade, thus saving time and expense.

The county secretary corresponds to school superintendent although his work is in a measure advisory, yet he has a great leverage on the teacher; he should have more power in some directions or our law, directing school officers to prescribe the course of study and the list of text books, should be amended.

A penalty should be imposed for failure to look after or do as the law requires. By the present system we are advancing, let us continue the same, and while approximating to a better condition of things by grading, even though it may be an imperfect grading, this alone will be an excellent thing for our district schools.

PHYSICAL CULTURE.

MISS MARY A. BLOOD, CHICAGO.

As I was listening last evening to Will Carleton's eloquent words upon the first link in "The Chain of Success"—health, I was wishing we might each one of us realize how much enjoyment and usefulness in life, how much mental power, how much moral strength we have it in our power to acquire simply by the development and proper care of our bodies. No one can give us this information, but there is no longer any question that physical culture enables every one of us to greatly increase his power in the world, not only his physical strength and endurance, but his mental and moral power.

To gain the greatest good from physical culture, we must study the needs of the individual, and adapt the work to his needs. At the very foundation of health lies the bearing, the habitual position in standing, sitting or walking, for this is constant. We must stand or sit well or no part of the body can be at its best.

Have you ever tried the experiment, suggested by Blaikie in his familiar little book, "How to Get Strong," of standing upon a street corner and noticing the positions of the passers-by? It is a most interesting and instructive experiment and any one trying it will soon agree with the

modern philosopher who said, "We build magnificent railroads but we are forgetting how to walk."

*In many cases you will find the body bent backward from the waist, and strange delusion, these people will often think they are standing straight. The farther they bend back the straighter they think they stand. So common is this position among us that it is called the American position.

Let us see what this position does. The weight of the upper part of the trunk instead of resting upon the large hip bones which are intended to bear this burden, and which can bear it easily, is thrown back upon the small of the back. With this unnatural burden pressing upon the weakest and most sensitive part of the back we wonder that we have backache. Then in walking in this position the weight is thrown back upon the heels. The bones of the foot are so arranged as to form a perfect spring, yielding when the weight is placed upon it and returning to its original position when the weight is removed. Who of us would prefer riding in a lumber wagon without springs to riding in a carriage whose easy motion softens every jar. Yet when we walk with this weight on the heels, we are jarring the body, especially the spinal cord with every step. This is of comparatively little importance if it occurs only a few times, but when it is a constant habit and is continued for years it becomes a serious waste of nerve force.

We see too the protruding head and rounded shoulders. This is especially common among students. In bending over their books they acquire this bowed position and some one will say, "Hold your head up!" and they lift the chin without changing the position of the rounded shoulders and the effect is much worse than before. The deluded student goes on cultivating an actual deformity which it sometimes takes years to overcome.

Another position which we see frequently is that of the sunken chest and protruding abdomen.

This position besides being extremely ugly is a constant hindrance to the work of the vital organs. The bony structure of the chest is lowered, pressing upon the lungs and squeezing them into far less space than they were intended to occupy. This prevents us from having our due supply of oxygen which is our very life. All the vital organs are lowered from their normal position and their action is seriously impaired thereby, for the higher the vital organs are carried the better is the health.

Now habit is a great power. We are every day strengthening the tendency to stand as we are standing, and by these bad positions we are not only injuring our health but misrepresenting ourselves. Strangers must judge us in part by our position and bearing. If we can habitually stand well we can save ourselves much in health, strength and happiness.

How should we stand? What is the correct position?

*First sway far enough forward to bring the weight onto the balls of the feet. To do this rise on the toes, then slowly come down and stop when the heels just touch the floor. You will likely find yourself standing much farther forward than usual. * Here is where you wish to stand; now lift the chest directly up, being most careful not to bend backward from the waist. Keep this position and then push upward with the crown of the head to make the spinal column as nearly erect as possible. Do not throw the shoulders back as you lift the chest. Lift the chest and the shoulders will be lifted with it and this will correct protruding shoulder blades. These prominences are caused by carrying the shoulders too low. Lower your shoulders and you will quickly see this.

* Miss Blood illustrated the various positions and exercises referred to by taking them on the platform.

* The chest lifted high is the natural expression of health and of happiness. If this high position of the chest is taken when we do not feel well and happy it reacts upon us and we feel better.

The correct position is not to be taken as an exercise only. It must become habitual. The habitual carriage of the body is of much more importance than any exercise simply as an exercise. It does not take long to form the habit of standing correctly unless the muscles are badly constricted. It is astonishing how manly a bearing a boy may acquire even with a few weeks' work, and the simple matter of good bearing has helped many an obscure man and woman to rise in the world.

Let us next notice the matter of breathing. Says an eminent physiologist, "The first and most indispensable requisite of health and even of existence is a constant supply of fresh air." This marvelous life-giving substance is around us everywhere, pressing into our houses at every crevice, enveloping us and forcing its way to our lungs. Nature is doing her utmost to induce us to take this elixir of life, and yet the average person probably does not use three-fourths as much air as he should use in ordinary breathing. Proper breathing is the corner stone of physical strength. Said a recent writer, "One of the first essentials of health is that each ultimate cell should be bathed in oxygen."

Our system demands two kinds of food, that which is taken into the stomach and that which is taken into the lungs. Of the two, the demand for air is much the more imperative. A person can go without food for days, but if we are deprived of air we can live but a short time.

The movement of the diaphragm in breathing is a most important factor in health. The diaphragm is as you know a soft muscle which forms the floor of the thorax and the roof of the abdomen and lies above and back of the stomach and liver. With each inspiration the diaphragm contracts and is thereby drawn downward and forward, making more room in the thorax for the lungs to expand. Since the diaphragm is above and back of the stomach and liver, when it contracts it moves these organs downward, forward and they in turn press against the soft walls of the abdomen and they move forward too. Not infrequently people reverse this process and draw up the diaphragm while inhaling thus lessening instead of increasing the capacity of the thorax.

To make sure that you are breathing correctly place the hand over the soft muscle in front and see that the hand moves outward while you inhale. This movement of the stomach and liver with each breath we draw is of great importance. Think what these organs do for us. The liver is the great purifier of the blood. One fourth of all the blood of the body is contained in the liver. Of the stomach a medical professor once said when exhibiting this organ to his class, "Behold the monarch of creation, the human stomach!" If we are happy we are indebted to our stomach for it. Who can be happy if he is suffering from indigestion? If we are rich we may thank our stomach. If we have a thought we owe it to the stomach. Nature has provided physical exercise for these organs. Every natural breath you draw presses the stomach and liver between the diaphragm and the walls of the abdomen. As we let out the breath they are relieved. This compression and relaxation should be kept up from birth to death.

This movement of the diaphragm in breathing then has to do with both classes of food of which I have spoken. By it we are able to take more

* Miss Blood illustrated the various positions and exercises referred to by taking them on the platform.

air into the lungs, and by this movement the stomach and liver are kept in a more active and healthful condition.

Breathe plentifully. The enlarging and strengthening of the lungs can be satisfactorily accomplished only by the exercise of these organs themselves. So far we have only spoken of standing and breathing. What of exercises?

1. All exercises must be planned to develop the whole man and not simply to cultivate a special part.

We do not need athletic training, neither is it desirable. Too frequently the muscles of the athlete are developed at the expense of the nervous system. The early death of those whose feats have astonished the world warns us that such training will not give the best development to the body. Dr. Winship could lift 2,700 lbs. but died of nervous prostration.

2. We wish to cultivate sustaining power, and what will give this? Blood making power sufficient to nourish the wasted tissues. We must have exercises especially planned to develop the vital organs. When a person is suffering from indigestion, he takes something hot. What does this do? It simply irritates the lining of the stomach and thus calls more blood there. Now we can take movements which will give actual physical exercise to the stomach and liver thereby calling the blood there and making those organs continually stronger and more vigorous, without the weakening reaction from stimulants.

3. The muscles should be exercised in due relation to each other. If one set of muscles is used all the others must act in harmony or nature's laws are violated.

4. No exercise should contain jerks. Do not jerky, spasmodic movements exercise? Undoubtedly, but you can get just as much exercise from a *steady movement without the unnecessary jar to the nerves. A jerk, too, is always awkward and why do we need to cultivate awkwardness.

5. Exercises must be adapted to the individual needs. All are not equally strong and no one must overdo. He will lose rather than gain thereby. No class of people need physical exercise more than do teachers. A teacher must necessarily spend his nerve force rapidly. He must arouse and quicken his pupils by the power of his own life. Many a time the teacher must lift the class by his own animation. A teacher is successful in just the proportion in which he can spend his life for others.

Then let me say to you, fellow teachers, exercise and breathe that you may partake largely of this life giving force which is all around us. Breathe that this grand factory of life may work more vigorously and your food be converted into rich nourishment for the exhausted tissues! Breathe that you may have vitality in abundance, overflowing, to give to those under your charge, that your life may be of greater use in the world.

* Miss Blood illustrated the various positions and exercises referred to by taking them on the platform.

SCIENCE TEACHING IN PRIMARY GRADES.

MISS NINA C. VANDEWALKER, YPSILANTI.

"And a little child shall lead them." Looking into the far distant future, the prophet of old saw the vision that today is being realized, for to the child of the present all hearts are turned, all minds directed, and all hands reached out. Whether it be literary talent, artistic skill, or scientific thought, all are devoted to the interests of childhood. The great heart of humanity has grasped the meaning of the prophetic vision.

For the interest now centering in the child there are two chief causes—the first scientific, the second practical. The study of the laws of nature has shown us at once our weakness and our strength in relation to the child. Spirit, the moulding power of life, is beyond our control; but like the material universe, life is the embodiment of laws which we may discover if we will but seek for them. Armed with a knowledge of the laws of development, and understanding the nature and power of environment, what may we not do for the child if we but act in accordance with these laws? Science has shown us a glimpse of what life may be at its highest levels, and this glimpse is the call, "Go thou up and possess this land." But the feet of childhood cannot find the way unaided. It is our duty to lead them there.

From the practical standpoint our duty to the child is of equal importance. With the growth of civilization life becomes more and more complex. Its demands and responsibilities become greater, its competition fiercer; its laurels more difficult to win. To meet the requirements of the present an equipment of the fullest development and the most careful, thorough training is necessary. Shall this development be what it should be, it must begin early and continue uninterruptedly; and shall the training be effective, it must be ingrained into the very habit and constitution of the growing child.

That he has a right to the fullest measure of life, a right to such preparation as shall enable him to cope fairly with the conditions he will find confronting him, no one will deny; else why exclaim against the wrong done the child to whom has been transmitted by the merciless laws of heredity, a diseased body or a depraved appetite? With our present insight into the laws of development, we see how much broader and fuller our own lives might have been, and our interest in the child's training and development is at once a recognition of his rights and a regret caused by the limitations of our own early training.

Do we, to whom the training of childhood is committed, listen to his unconscious plea for the freedom of faculty that comes from the harmonious development of all; the freedom from the restriction of faulty habits, mental or moral? Like the fauna of the world, the child feels instinctively the adaptation or non-adaptation of the surroundings to its development; unlike the animal, the child cannot migrate when these are unfavorable. Living under unsuitable conditions, however, means for the child and the animal alike, a stunted growth, a failure to realize the ideal of its type.

The mind of man is ever seeking after truth. In the infancy of the race, it was satisfied with facts; later on, only with their relations, and the laws that govern them. This knowledge of law is the key to power over nature. The age is pre-eminently an age of conquest, not over kingdoms of men, but over the great kingdom of nature, and the weapon of conquest is nature

herself. She has taught her conquerors the art of war. Shall the future let this scepter of power slip from her fingers? In this domain there are still many worlds to conquer. Then the child of today must learn to wield this scepter. He must study nature, unravel her phenomena, and discover her laws. By every natural instinct he possesses, his inborn curiosity, his love of out of door life, his sympathy with animate and inanimate objects, he says: "Teach me to rule this kingdom."

Considering the scientific spirit of the age; considering the problems the child must meet and solve as he reaches maturity; considering the value of scientific knowledge in all relations of life, would it not be logical to suppose that the study of nature would occupy the leading place in our school system? Instead it is wholly ignored until the high school is reached, and by this time but a small handful of the great army of children that entered the doors of the primary department, remain.

But the practical value of scientific training is not its only claim to a place in the public school system. The child is a born investigator. Nature has provided him with means—ears, eyes, hands, and he delights in their use. These are set aside, however, when he enters school, and he "begins his education," by learning to read, to write, and something of language and numbers, and "the idea is sedulously inculcated that reading is the straight and narrow way that leadeth to intellectual life," says Wm. North Rice. "These are the instruments of investigation," says the teacher; "he is learning to use his tools." But the child is not satisfied with second-hand knowledge—if the contents of the ordinary first reader can be called "knowledge," he wants to use the instruments that nature intended him to use—his senses. That this strong tendency to the activity of some special faculty indicates the need of training that faculty at that particular time, there can be no question. That this activity has some particular part to play in the child's development is equally clear. The activity of the senses in early childhood is nature's hint to utilize them in formulating our systems and methods of instruction.

Dr. Mary Putnam Jacobi says: "The use of language does not indicate the first activity of mind. Education should not, therefore, begin with language. It should begin with systematic training of the sense activities that occupy the first six or seven years of a child's life, and alone are consciously exercised at that time." But upon what shall these activities be exercised, if not upon the ever-varying phenomena of nature? She invites every one of his powers to activity, and leads him to see first her outward manifestations, and then her hidden laws. To such teaching the child responds in the affirmative of satisfied interest; to the teaching of books at this stage, with the negative of restless impatience or dull discontent.

Is it strange that every device must be resorted to in order to hold his attention when everything that nature intended for this period is carefully excluded? "The difference between a natural and an arbitrary method," says Thos. Wentworth Higginson, "is simply the difference between rowing with the current or against it." Many a teacher finds herself pulling in opposition to the forces of nature as manifested in the tendencies of the child. Is there no relation between this fact and the nervous exhaustion that follows teaching?

But is it good logic to give years to the training of one instrument of investigation—language—and to leave nature's own instruments,—the eye, the ear, the hand, to the chance training of circumstances?

Dr. Jacobi says further, "The subjects of the child's first studies should

be selected not on account of their ultimate utility, but on account of their influence on the development of the faculties. If literature were the main business of life, there would be some logic in the extraordinary prominence habitually assigned in education to the study of modes of literary expression. From the present standpoint, education means such an unfolding of the faculties as shall put the mind into the most effective relation with the entire world of things. Not speech abstractions, the highest conquest of the mind, but visual conceptions, which are its earliest spontaneous achievement, should be the first object of systematic training." Shall we then exclude reading and language from the primary school? By no means. We only need to recognize that instruction in reading, language and numbers is not all of education, and that these should not exclude other things equally valuable or more so from the standpoint of development.

Of the importance of trained senses in all practical affairs of life, it is unnecessary to speak; but sense training for its own sake is not the main object in view. Perception is the base of the intellectual pyramid whose apex is judgment and reason. The relation of the trained senses to memory is readily seen; its effect upon the judgment, though not so readily granted is no less important. Professor Woohull of the New York College for the training of teachers says. "The most common intellectual faults are careless observation and careless inference. The student of science holds open court in his mind; he waits for evidence before judging. The constant habit of drawing conclusions from data and of verifying these by observation and experiment can alone give the power of judging correctly. The effect of such work upon independence of character needs no comment. Whims, prejudices and superstitions, which warp the judgment, are creatures that thrive only in mental darkness; they disappear in the broad daylight of scientific truth. For such knowledge the child craves; instead of this, the substance of knowledge, we give him only the forms of its expression.

Do you say that we claim too much for the study of nature as a means of development; that these results have not followed the teaching of science? Unfortunately there seems to be truth in the charge. But why? Is it nature's fault or ours? Her time for observation is during early childhood. We reverse the order in our wisdom, and what is the result? Wm. North Rice says, in that excellent monograph—*Science Teaching in the Schools*—I feel daily that the efficiency of my work as a student and teacher of science is impaired by that vice of my early education which repressed rather than developed whatever powers of observation nature may have given me. My professional life has been a perpetual struggle to rid myself of some of the mental habits induced by an unnatural education. It is worse than making bricks without straw to teach natural science to college juniors or seniors in whom disuse has wrought so complete an atrophy of the powers of observation that they hardly know that there is such a thing as an external universe." "All force produces motion unless it is spent in overcoming resistance," says Spencer. What progress might we not all make if none of our mental force was exhausted in overcoming resistances caused by faulty education. This is what the child should be saved from. The strength spent in the high school in overcoming the habit of not seeing, of not inferring, and of not seeking the cause for a given effect, if given in early childhood to the cultivation of the opposite habits would insure attainments now almost beyond the

limit of our vision. That the time to begin the study of nature is not in the high school but in the primary grades no one who has given any thought whatever to psychological questions will deny.

The defects of the school in this respect have in one sense furnished a remedy for their cure, since the non-recognition of the laws of the child's development in the school led the apostle of childhood, Froebel, to that new revelation of educational truth, the kindergarten. The spread of the kindergarten idea the world over, and the rapidity with which its principles are leavening the whole body of educational practice shows how deeply felt has been the conviction that better things are needed for the child. In the kindergarten his desire to see, to handle, and to analyze things for himself is gratified. Nature's indication of his need is the basis of the plan and method of the work; consequently his interest is absorbing, his happiness complete, and his development assured.

Wherever a kindergarten is established it becomes a center of pedagogical inquiry. Teachers who had supposed their whole duty to consist in assigning lessons and hearing recitations awaken to the meaning of childhood and a study of the child. If there was a kindergarten in connection with every graded school so that the primary teachers of our land could see the child taught and governed as nature would have him, the problem of right methods in the primary grades would soon be solved. Fortunately for the children, primary teachers are recognizing as never before that to be truly qualified for their work, a knowledge of the kindergarten principles and practice must form a part of their equipment.

In attempting anything in the line of nature-study in the primary grades we need to have well-defined ideas of the kind of work to be done and the specific object to be attained. I can find no better words to express these than those of the author already quoted. She says :

"Science consists of two parts ; the acquisition of sense impressions through contact with external phenomena; and the collation, comparison, and classification of these impressions, reasoning upon them, and the establishment of the laws of phenomena. The first process collects the raw material of science. It is the second process that creates science out of this raw material. Science is not nature, but the product of the mind acting upon nature. The first process corresponds to the activity of sense impressions which constitute the first form of conscious activity. This is properly called the pre-scientific period. At this time the mind may be occupied in collecting data for science, but cannot itself wield the scientific methods. Its efforts must be directed in accordance with scientific principles, and the knowledge required arranged in such orderly sequence that when the mind is ripe for them, scientific relations will be readily perceived and understood. The comparison of a multitude of objects in order to abstract their common characteristics and thus obtain their generic or class conception is suited to the scientific; not the pre-scientific stage of progress. It does not belong to the first activity of childhood. The first efforts of perception should be directed towards the more intense individualizing of objects and not to their classification; towards appreciation of specific differences rather than generic resemblances. During the pre-scientific stage the cardinal necessity is that of filling the mind with an abundance of distinct concepts and images of real concrete existences."

"Fill the cells with honey first and the future pupa will thrive in time."

The mind grows in concentric circles, and the innermost circle must be composed of particulars ; the next one may reach out into some few general

truths, and so on with each successive growth. Groups of related facts become in turn centers of growth, for all life develops from centers. The work of the primary teacher is in the first or pre-scientific stage mainly.

In each science there is a class of facts that children of the first or second grade can readily grasp. In the same science there is another class of truths of a little higher order, suited to the pupils in the intermediate grade, and still another adapted to those in the grammar or high school; for the genesis of a science in the individual must accord with the genesis of that science in the race. Thus we should have cross-sections of a given science in each grade. This may seem like slow work, but the powers of generalizing and judging are of slow growth, and we lose instead of gaining time by attempting to force them.

This correspondence between the different classes of truth and the different stages of mental growth needs to be carefully sought out and made use of before the teaching of science can be really scientific. The skill and knowledge of the specialist in science and the specialist in primary work must be combined in the working out of this problem. Very little if anything has yet been done in this direction.

The first thing in beginning work, is to inspire a love of nature, and to encourage the children to collect and bring in specimens of all sorts of natural objects and to make these the subject of regular lessons as far as may be. This may seem like going back to the desultory object lesson, but the elements of knowledge form a circle in which all the sciences have their beginning. When this interest has been awakened, more systematic work may be begun.

Because of the strong bond of sympathy between children and all other living things, especial attention should be given to plants and animals. In each a few striking typical forms should be chosen, around which subsequent knowledge may group itself, the point being, to begin with what is familiar rather than with what is simple, the cat, the dog, the cow, etc., instead of infusoria, crinoids or sponges. The animals which the children can see alive, should form the starting point. An aquarium is a never failing source of interest, and gives an opportunity for the systematic study of fishes, polliwogs and their transformation, and many other forms of life.

Lessons in physiology and hygiene should be given in every school and every grade. Much has been done to assist teachers in presenting this subject properly, since so many states have passed laws making this subject compulsory. The effect of this work upon the health and habits of the children, and indirectly upon the homes, can hardly be over-estimated.

In the leading schools of the country much has already been done in botany and zoology. The American Society of Naturalists devoted a whole day to the discussion of science-teaching in the schools, in 1887. The paper on that subject on that occasion by Wm. North Rice, already referred to, should be read by every one interested in the subject. It contains a scheme of instruction in natural science which is at present in operation in the schools of Middletown, Conn. This is of great value as expressing "the opinion of the great body of working naturalists and advanced teachers of science."

The publication of *Johonnot's Natural History Readers* marked a great step in advance. They are invaluable as a guide to observation in the hands of the teacher, or as supplementary reading in the hands of the pupils. In the preface to the book of cats and dogs, Prof. Johonnot says:

"Through the love of pets, children may be led to careful observation, comparison and description, steps at once necessary to mental growth, and leading up to the portals of science. From the obvious in structure and movement, the mind is led to see relations and the adaptation of structure to function. As each new animal is introduced the study goes on by comparisons, showing resemblances and differences and pointing to scientific classification." The point is to lead pupils to take the initial steps in science rather than to get the expression of scientific results.

No less valuable are the *Nature Readers*, by Julia McNair Wright. These deal with common insects and their transformations, worms, fishes, birds and plants. The author's style shows her sympathy with the child and her insight into his needs, as well as her perfect mastery of the subject matter. The enthusiasm with which these books have been received by teachers and pupils is sufficient proof of their rare merit.

The whole circle of the sciences is touched upon in that admirable series of articles by Edward G. Howe, in *The Kindergarten*, on "Systematic Science in the Kindergarten and Primary School." These are the perfection of spirit and method and ought to be read by every teacher in the land. In the line of plant studies, "Fairy Land of Flowers," by Mara L. Pratt, and "Flower People," by Mrs. Horace Mann are invaluable. In the direction of physical sciences much less has been done, though considerable attention has been given the subject in the leading educational journals.

The manner and method indicated in these books mentioned, the happy blending of fact and fancy, is a glimpse into the new world of educational practice, that in which the spirit of Fröbel reigns supreme. In the words of Prof. Johonnot, "There is science to instruct; story, vivid and authentic, to interest, and song, fresh and vigorous to inspire." In all these the nearness of the child to the heart of nature is recognized, and this innate sympathy is built upon as the foundation of "certain knowledge, living interest, and love of learning." The poetic instinct of childhood is appealed to in the fanciful clothing of scientific truths in the clearest of prose or the choicest of poetry: The first is to be read or told to the child; the second may be committed to memory.

The effect of such work upon the moral nature of the child can hardly be overestimated. "You cannot drive away darkness by beating it with a stick, but by bringing in a light," is true in the moral and spiritual worlds as well as in the physical. Bring into the child's heart the light of pure, elevating thoughts, and darkness will disappear. Forbidden thoughts thrive in the garden of the heart when we neglect to sow the seeds of insight and elevating purpose there. Mrs. McNair Wright says: "If we can open wide the gates of the 'fairy land of science,' if we can bring the child near to the heart of nature, if we can absorb his hours of leisure and many of his hours of brain work in the study of nature out of doors, we shall have done much toward making him robust in body, sound in mind, cheerful in disposition and useful in the future."

The effect of this work in the school upon the language of the child may be imagined. An atmosphere of beautiful thoughts, clothed in beautiful language; clear, logical seeing of related truths,—what more can be desired as a foundation for language training? It is true that much mechanical work must be done in the school to insure the accuracy and readiness of expression needed; but too often this is merest routine, in which there is no inspiration from the thought. "The amount of effort spent in this

way" says Prof. Johonnot, "if given to the awakening of thought, would much more effectively secure the mechanical ends sought, and at the same time yield fruit in other fields of mental activity." It is true here as elsewhere: "Attend to the higher interests, and the lower shall be added unto you." "The tendency to subordinate science to language should be resisted; for language is but the medium, while science deals with the actualities for which the medium exists," says Thos. Balliet.

That there should be a definite time and place for this work on the daily program goes without saying; but the success of the lesson will depend almost wholly upon the teacher's skill as a questioner. She needs to be a veritable Socrates. She must direct his senses, stimulate his desire, present essential points, and preserve an underlying method in his observation of which he is as yet unconscious. "The undisciplined gaze of the child helps him to perceive little, until the teacher's simple questions, methodically arranged, direct his attention to what he should observe, and lead him to observe in logical fashion."

The science lesson will thus become the pivotal point about which the work of the program revolves. Forming the basis of the language work it will be both easy and natural to make the reading swing into line by using the readers mentioned or by making reading lessons out of the science lessons and writing them upon the board. If the reading lesson be thus made a systematic summary of the points developed in the science lesson it will be of much greater interest and value than the lessons in any ordinary reader. Thus almost unconsciously that important step will have been taken of correlating the different subjects, between which there is now so often not the slightest relation. The kindergartener knows that the same idea must appear and reappear in every possible relation in order to become thoroughly impressed on the child's mind. The school needs to learn this lesson. Because of this very lack, the object lesson of a few years ago was so often fruitless. The observation lesson stopped with the observation, whereas the ideas developed should have been continued and impressed through the medium of language, oral and written, reading and spelling, and drawing whenever possible. The schools are often charged with attempting too many things. We have far too many if each is to be separate and distinct from every other. The charge fails when each subject forms a part of a unity which is in itself but a part of a larger whole, the work of the week or term.

The time and strength saved to both teacher and pupils by the correlation of work would accomplish much in other directions. In answer to the objection that there is no time for science teaching, Professor Rice says: "Let the waste of time and mental energy be stopped which is now involved in attempting studies at unnatural times and in unnatural ways, and there will be time enough. Of all economies the most important is the most neglected, the economy of mental effort." This condition of things implies an insight into the laws of mental development, a knowledge of the relative value of the mental powers and the relation of the one to the other, on the part of the teacher; and unless she is so equipped good work cannot be expected. That each teacher could do comparatively little, if results are to be measured in terms of scientific knowledge, there can be no question; it is not a matter of quantity, but of quality of work. What Mary Alling Aber says of the mother is equally true of the primary teacher:

"As one's finger may trace in the yielding soil a channel for the outflow

of a tiny spring, and at its fountain head determine the course of a river, so in the early years the mother may, with little effort give direction to the energies of the child. She may not accompany it far on its course or contribute much to the current of its intellectual life; but let her give the direction and all the powers of nature will conspire with the child's inborn force to increase the volume and strength of the onrushing stream."

The systematic study of nature in the schoolroom is one of the reforms to be advanced or retarded by the teachers of the present generation. Much has been done in leading the way. Shall we take possession of the land for the sake of the children, or shall we drown the voice of conscience and turn a deaf ear to nature as she speaks through the tendencies and aptitudes of the little child? Education is nothing if not an inspiration. In how many of our pupils have we kindled the holy fire of enthusiasm for truth and love of real knowledge? Alas, too few! The sacred flame is too often dead in our own souls. We stand on too low a plane as leaders of the youth of our own land. Development, evolution must go on in our standards and ideals, and in those of the profession to which we belong. But development is the result of activity. In the words of Louisa P. Hopkins, "Evolution is a bursting of the fetters, a pressing against our environment, a strong reaching forward, until with throe after throe we are brought forward into larger places, on the higher standpoints, and into nobler sphere of life and activity"

DISCUSSION

Supt. W. H. Hoxey said:

In this discussion the word "primary" will be understood in the general sense of "lower" as the term is usually employed for the grades below the high school.

We in Monroe have two hours a week in science, from the fourth grade through the eighth. The work is done under the direction of a special teacher who also has work in the high school. Pupils go to the laboratory where the experiments contained in Paul Bert's books are performed before them by the teacher in the order of the text, which is then carefully studied as recitation work. In the fourth grade we use Paul Bert's *Primer of Scientific Knowledge*, published by J. B. Lippincott & Co. This is a brief summary of the sciences contained in his larger work, *First Steps in Scientific Knowledge*. The fifth grade takes up part I. of this book, on animals; the sixth, parts II. and III., on plants, stones, and soils; the seventh, parts IV. and V. on physics and chemistry; and the eighth, parts VI. and VII. on physiology and botany. The ideal method of course would be to have the pupils do the experiments themselves and we are working toward this. Just the right book for this work hardly seems to exist as yet.

I do not see why this matter has not some bearing on the manual training idea; for in this science work, if we could but get the necessary materials and teachers, we could give much valuable training of the eye and hand, without meeting the charge, brought against the schools of Paris by Klemm, of turning out workmen for a particular trade.

A frequent charge made against the schools is that they are crowded with studies. This seems to me to arise not so much from the number of subjects as from the lack of co-ordination and harmony among them. We connect our science work with language by requiring each pupil once a week to write a composition on some subject chosen from their science study during the week. The subjects for these essays are contained in the books given above.

I have no experience in the teaching of science in the first, second and third grades but judge it to be perfectly practicable and of great value. The books must be simple, of course, but the value of the training to the imagination of little children could be made very great.

One thing is very certain in this science work. The interest will prove unflagging. The children in Monroe have made quite a large museum this year of objects illustrating the text and they are constantly on the alert to add to it.

In connection with the science work we have introduced at Monroe drawing through

all the lower grades and elementary geometry in the sixth, seventh and eighth. These topics all aid each other.

We should not, in my opinion, delay the introduction of science on the ground that no suitable teacher is at hand in whose charge to put the work. Usually one of the teachers can be found who takes an interest in science and who will be willing to work up in it as a specialty. Why not encourage more of our boys to look forward to places in the public schools after graduating? Such work as this would interest many of them and lead them to pursue advanced studies.

In conclusion, let us as teachers be progressive. Let us not wait for the people to drive us to the improvement of the schools, but let us rather lead the van of progress. The school system of the country is changing rapidly and must change rapidly if the schools are to retain their hold on the people.

Along this line of science work is one of the most important advances.

REPORTS

FROM

STATE AND INCORPORATED

EDUCATIONAL INSTITUTIONS.

UNIVERSITY OF MICHIGAN.

THE PRESIDENT'S REPORT.

To the Honorable Board of Regents :

I herewith offer to you my Annual Report for the year ending September 30th, 1890.

The following is the list of the appointments, resignations and changes of titles in the faculties.

In October, 1889, W. J. Hussey, B. S., was appointed instructor in Mathematics for one year.

In March, 1890, Edward D. Campbell, B. S., was appointed Assistant Professor of Metallurgy for three years from October 1, 1890; and Instructor J. H. Drake, A. B., was appointed Assistant Professor of Latin for three years from October 1, 1892, with leave of absence for two years from October 1, 1890, for the purpose of study in Europe.

In June, 1890, appointments were made as follows :

PERMANENT APPOINTMENTS.

Paul C. Freer, M. D., Ph. D., (Lecturer in 1889-90,) Professor of General Chemistry in Literary and Medical Departments; William H. Howell, M. D., Ph. D., (Lecturer in 1889-90), Professor in Physiology in Literary and Medical Departments; A. B. Stevens, Ph. C., (previously Instructor), Lecturer on Pharmacy in School of Pharmacy.

APPOINTMENTS FOR THREE YEARS.

Fred N. Scott, Ph. D., Assistant Professor of Rhetoric.
F. N. Cole, Ph. D., Assistant Professor of Mathematics.

APPOINTMENT FOR TWO YEARS.

John C. Rolfe, Ph. D., Assistant Professor of Latin.

APPOINTMENTS FOR ONE YEAR.

Alexander Ziwet, C. E., Acting Assistant Professor of Mathematics.
M. W. Haskell, Ph. D., Instructor in Mathematics (reappointed).
(Resigned in July.)
W. J. Hussey, B. S., Instructor in Mathematics (reappointed).
F. G. Novy, Sc. D., Instructor in Hygiene (reappointed).
William W. Campbell, B. S., Instructor in Astronomy (reappointed).
C. W. Belser, Ph. D., Instructor in German and Hebrew (reappointed).
James H. Tufts, A. M., B. D., Instructor in Philosophy (reappointed).

George W. Patterson, A. B., S. B., Instructor in Physics (reappointed).
 Joseph L. Markley, Ph. D., Instructor in Mathematics.
 Willard K. Clement, A. M., Instructor in Latin.
 E. W. Fay, Ph. D., Instructor in Ancient Languages.
 J. V. Denney, A. B., Instructor in English.
 J. H. T. McPherson, Ph. D., Instructor in History.
 C. C. Marden, A. B., Instructor in French.
 Moritz Levi, A. B., Instructor in French.
 G. A. Hench, Ph. D., Instructor in German.
 Max Winkler, A. B., Instructor in German.
 F. C. Newcombe, B. S., Instructor in Botany.
 James N. Martin, Ph. M., M. D., Acting Professor of Obstetrics and Diseases of Women and Children (Department of Medicine and Surgery).
 W. F. Breakey, M. D., Special Lecturer on Dermatology (Department of Medicine and Surgery).

The following special lecturers were appointed in the Law Department for one year :

M. M. Bigelow, A. M., Lecturer on Insurance.
 Wm. H. Howell, M. D., Ph. D., Lecturer on Microscopy in its Medico-Legal Relations.

Marshall D. Ewell, LL. D., of Chicago, Lecturer on Medical Jurisprudence.

Henry B. Brown, LL. D., Detroit, Lecturer on Admiralty Law and Patent Law.

Samuel Maxwell, Associate Justice of Nebraska, Lecturer on Code Pleading and Practice.

James L. High, LL. D., of Chicago, Lecturer on Equity Jurisprudence.
 Professor H. C. Adams was granted leave of absence for one year, and Professor F. M. Taylor, Ph. D., was appointed Lecturer on Political Economy for the first semester, and Frederick C. Hicks, Ph. D., Instructor in Political Economy for the second semester.

Professor Carhart's title was changed to Professor of Physics and Director of the Physical Laboratory, and Professor Kelsey's to Professor of the Latin Language and Literature.

Henry F. Lyster, A. M., M. D., resigned the Chair of the Theory and Practice of Medicine and of Clinical Medicine in the Department of Medicine and Surgery.

In July John J. Abel, Ph. D., was appointed Lecturer on Materia Medica and Therapeutics in the Department of Medicine and Surgery for the coming year ; Dr. Herdman's title was changed to that of Professor of Nervous Diseases and Electro-Therapeutics, with a corresponding change of his duties ; Fred Morley, B. S., was appointed Instructor in Descriptive Geometry and Drawing for one year ; Glen P. Swiggett, A. B., Instructor in German and French for one year ; and E. P. Lyman, A. B., Instructor in Mathematics for the same period.

In September W. S. Christopher, M. D., was chosen Lecturer on the Theory and Practice of Medicine and on Clinical Medicine for the year 1890-1.

Severely as the University has been afflicted during the past few years in the death of some of its most eminent teachers, it has suffered no heavier loss than in the decease of Professor Henry S. Frieze on December 7, 1889. For five and thirty years he had served this Institution with a fidelity and devotion never surpassed by any one of the many noble men

whose names adorn the roll of her Professors. No man since the days of Dr. Tappan has done more, perhaps none so much, to shape the policy of the University and to insure its success. His last days were made happy by the spectacle of its prosperity. He has gone to his rest, rewarded with the gratitude and affection of the many pupils, who had been fortunate enough to sit under his teaching. The results of his inspiring labors and the memory of his beautiful life will long remain as the priceless possession of the University.

To our great regret we are called to lose the services of Henry Wade Rogers, LL. D., Tappan Professor of Law, Professor of Roman Law, and Dean of the Law Department, who has been chosen to fill the important post of President of the Northwestern University. We appreciate the honor which is conferred upon this University by this honor bestowed upon one of her sons, who has rendered so valuable service in the discharge of his official duties as teacher and as executive officer of our great school of Law. To his enterprise and ability the rapid growth of that school in recent years is in no small measure due. Our best wishes for his success follow him to his new and important field of labor.

The following degrees have been conferred :

DEGREES ON EXAMINATION.

Bachelor of Letters.....	20
Bachelor of Science (in Biology).....	1
Bachelor of Science (in Chemistry).....	3
Bachelor of Science (in Electrical Engineering).....	3
Bachelor of Science (in Mining Engineering).....	1
Bachelor of Science (in Mechanical Engineering).....	4
Bachelor of Science (in Civil Engineering).....	12
Bachelor of Science.....	10
Bachelor of Philosophy.....	28
Bachelor of Arts.....	51
Mining Engineer.....	1
Civil Engineer.....	1
Master of Science.....	3
Master of Philosophy.....	2
Master of Arts.....	10
Doctor of Science.....	1
Doctor of Philosophy.....	3
Doctor of Medicine (Department of Medicine and Surgery).....	88
Bachelor of Laws.....	209
Master of Laws.....	6
Pharmaceutical Chemist.....	32
Doctor of Medicine (Homoeopathic Medical College).....	22
Doctor of Dental Surgery.....	37
	<hr/>
	548

HONORARY DEGREES.

Doctor of Medicine.....	1
Master of Arts.....	2
Doctor of Philosophy.....	1
Doctor of Laws.....	1

Total number of degrees conferred..... 553

The number of graduates on examination was larger by 103 than in the year preceding, much larger than in any year previous to that, and much larger than the number of graduates from any other American university at any time. This fact is the more striking and gratifying when we

remember that we have during the past few years largely increased the requirements for graduation in most of the departments.

The attendance of students was as follows :

DEPARTMENT OF LITERATURE, SCIENCE AND THE ARTS.

Resident graduates.....	45	
Candidates for an advanced degree, enrolled in other departments.....	6	
Graduates studying <i>in absentia</i>	33	
Candidates for a bachelor's degree.....	777	
Students not candidates for a degree.....	148	1009

DEPARTMENT OF MEDICINE AND SURGERY.

Resident graduates.....	3	
Third year students.....	94	
Second year students.....	121	
First year students.....	157	375

DEPARTMENT OF LAW.

Resident graduates.....	5	
Seniors.....	219	
Juniors.....	277	
Special students.....	21	
Students enrolled in department of literature, science and the arts.....	11	533

SCHOOL OF PHARMACY.

Resident graduates.....	3	
Second year students.....	33	
First year students.....	47	83

HOMOEOPATHIC MEDICAL COLLEGE.

Resident graduate.....	1	
Third year students.....	23	
Second year students.....	23	
First year students.....	26	73

COLLEGE OF DENTAL SURGERY.

Seniors.....	41	
Juniors.....	26	
Freshmen.....	36	103
		2176
Deduct for names counted twice.....		17
Total.....		2159

That is a larger number than has ever before been enrolled in any American University.

The increase in total attendance during the last five years is shown by the following statement:

TOTAL ATTENDANCE.

In 1884-5.....	1285
In 1885-6.....	1391
In 1886-7.....	1562
In 1887-8.....	1667
In 1888-9.....	1885
In 1889-90.....	2159

The number of students present during the past year was larger by 874 than the number five years ago.

The attendance by departments during the last two years was as follows:

	1888-9	1889-90
Literary Department.....	826	1009
Department of Medicine and Surgery.....	371	375
Department of Law.....	401	533
School of Pharmacy.....	106	83
Homœopathic Medical College.....	73	73
Dental College.....	108	103
	<hr/> 1885	<hr/> 2152

The large increase, it will be seen, was in the Literary Department, 183, and in the Law Department, 132. There was a slight gain in the Medical Department, and a slight loss in the School of Pharmacy and in the Dental College, while the number in the Homœopathic College was unchanged. As the number of Pharmacy Schools in the country is increased, the relatively high requirements of this school keep the number of students within moderate limits. With the great demands made upon our Chemical Laboratory by students from other departments this result is not deplored. The Dental College is also overcrowded.

The number of women during the past two years has been thus:

	1888-9	1889-90
Literary Department.....	207	284
Medical Department.....	59	57
Law Department.....	3	2
School of Pharmacy.....	3	1
Homœopathic Medical College.....	23	20
Dental College.....	6	5
	<hr/> 301	<hr/> 369

There has been a slight decrease in each department except in the Literary, where there was a very large increase, 77. This carries up the percentage of women to the whole number of students a little more than one per cent over the previous years. In 1887-8 the women formed sixteen and nine-tenths per cent of all the students; in 1888-9 not quite sixteen per cent; 1889-90 very nearly seventeen and one-tenth per cent. Of the 84 resident graduates and candidates for higher degrees 22 were women. Of all the students in the Literary Department twenty-eight and one-tenth per cent were women.

Forty-three of the States and Territories are represented here. Michigan sends 1,019 students. Next comes Illinois with 223, then Ohio with 175, and then Indiana with 103. New York has 84, Iowa 65, Pennsylvania 62. Japan has 21 of her sons with us. Other foreign provinces and states represented are Ontario, Quebec, Nova Scotia, New Brunswick, Manitoba, New Zealand, Porto Rico, Hungary, Germany, England, Russia, Italy, Mexico, and the Hawaiian Islands. It is indeed a cosmopolitan company that assembles in our halls.

At this time it appears highly probable that the number of students for the current year will exceed 2,400. Not the least of the advantages afforded by life at the University is the enlarging and broadening influence of contact with these students drawn from all parts of the country, we might almost say, from all parts of the world. The presence of these representatives of so many states and nations attests in a most impressive manner the far-reaching power of the University.

The following facts concerning the students who entered the literary department are of interest:

The unprecedented number of 479 persons applied for admission during the year, 450 in the first semester and 29 in the second. After deducting the names of those rejected and of those who withdrew almost immediately after admission, there remained 436 new names on our rolls. Of those admitted to full regular courses:

Entered on diploma.....	164
Entered on examination.....	131—295
From other colleges:	
On advanced standing.....	32
Graduates.....	11— 43
Select students.....	98
Total.....	<u>436</u>
Entered for A. B.....	74
" " Ph. B.....	35
" " B. S.....	35
" " B. S. (Chemistry).....	3
" " B. S. (Biology).....	3
" " B. S. (Civ. Eng.).....	28
" " B. S. (Mech. Eng.).....	32
" " B. S. (Mining Eng.).....	2
" " B. S. (Electr. Eng.).....	15
" " B. L.....	34
" " A. M.....	3
" " Ph. M.....	2
" " Ph. D.....	3
" " Select.....	98—436

It will be understood that our own graduates who pursued studies for higher degrees are not included in the above enumeration.

During the year a large addition to the chemical laboratory has been completed and occupied. It was built without exceeding the legislative appropriation of \$21,000. It improves the external appearance of the laboratory and furnishes much needed accommodations. It contains tables for eighty students, three lecture rooms and a pharmaceutical and chemical museum. There are now in the whole laboratory tables for 400 students.

Last year I had the pleasure of announcing the establishment by Mrs. Elisha Jones of a Classical Fellowship as a memorial of her husband. In March last Mrs. Clara Harrison Stranahan, of Brooklyn, N. Y., executed a covenant to place the sum of twenty-five thousand dollars in the hands of the Regents to establish scholarships for the education at the University of the descendants of her father, Seth Harrison.

The Regents desire it to be known that they are ready to accept funds in trust for the aid of the University or of students, to keep such funds apart from all other funds of the institution, and to administer them with care.

The visit of the Pan-American Congress to the University last autumn was a noteworthy event in our history. The students coöperated heartily with the faculties in making preparations for a becoming reception of the distinguished guests. We have every reason for supposing that our visitors carried away a pleasant impression of the University.

In the earlier weeks of the year, the Literary Department was somewhat embarrassed by the unprecedented number of new students. It became necessary to make some addition to the teaching force. Until the engi-

neering classes can be accommodated in some other building than University Hall, the serious inconvenience experienced last year in finding room for all classes will continue and probably increase. No considerable relief is practicable, until our new hospitals are finished, and the old hospital buildings are available for some of the collegiate or professional work. Some further increase of the number of instructors in the Literary Department has wisely been made in anticipation of another large entering class this year. In the professional schools, in which instruction is given chiefly by lectures, an addition to the number of students does not create a necessity for so large an increase in the corps of teachers as the same addition to the number in the Literary Department calls for. In a large part of their work, especially in the earlier part of the course, the students in the Literary Department must be taught in sections of not more than thirty. It was necessary, for instance, to divide the lowest class in mathematics last year into thirteen sections.

The number of graduate students continues to increase. This last year it reached 84. I need hardly say that while we deem it fortunate to have the inspiring presence of so many students pursuing advanced work, the instruction of them lays a heavy load on a number of our Professors. It is genuine University work in the best sense of the expression which is done by these earnest graduates. From their ranks is drawn every year a considerable number of instructors for institutions of collegiate rank. They represent us most creditably. Through them the University confers some of its chief blessings upon the public. We must, therefore, do all in our power for this class of students. But it should be understood that in so far as the time and strength of the Professors are devoted to these, they must be relieved of work with the undergraduates.

The relative number of engineering students increases from year to year. We had 160 pursuing engineering courses during the last year. While the number of those choosing civil engineering does not diminish, there is a rapidly increasing desire for instruction in mechanical and electrical engineering. Our shops are crowded, and we bid fair to be confronted soon with the question whether we shall enlarge our shops or refuse the application of students.

During the year the literary faculty has given consideration anew to a question which has engaged their attention more or less for the last ten years, namely, whether we shall make the bachelor's degrees attainable by three years of study instead of requiring four years. Acting President Frieze in his annual report in 1881 presented in a most cogent form the principal arguments in favor of such a change. The subject has within the past few months been brought into the field of public discussion by the action of the Faculty of Harvard College in recommending such a plan to the corporation and overseers of that institution. The overseers have not yet adopted it.

There is a wide-spread and deep-seated conviction that one ought to be able to begin his professional career at an earlier age than is possible to most men who take the full college course and the full course of study in a professional school. Both courses require from six to eight years. The student who does not get to college until he is eighteen, cannot enter on his professional work until he is twenty-four or twenty-six. As some years of waiting are generally required before he is well started in his business, he is not fairly launched until he is thirty or more years old. It is there-

fore argued with great force that some way should be found to abridge his term of study

Furthermore, it is contended that many men who intend to study law or medicine are deterred from entering on college studies by the length of the period now required for procuring a bachelor's degree, and many others are obliged to content themselves with a part of a college course, while if the curriculum were shortened by a year they could take the whole of the college work. Thus, it is claimed, a higher average grade of culture would be secured in professional life than that which we now find.

It certainly is desirable and I believe possible to save some time in the education of the men who take four years work in college and then their professional training. I am convinced that considerable time can be gained in the better arrangement of the work in schools. After the student is prepared for college, two plans for completing his education in briefer time than has usually been consumed are possible:

First, Only three years of college work may be asked for the bachelor's degree. In that case the student must be required to do more work in each year than he has done heretofore in college, or the standard of attainment for graduation must be reduced;

Secondly, Substantially the plan which we have followed for several years may be adopted. The condition of attaining the bachelor's degree is not meeting a requirement of time, but of work. One must complete so many courses of study, a part of which are fixed, a part elective. While in order to avoid cramming there is a limit to the number of courses which a student may undertake at once, still, with the liberty given, a capable and industrious man may easily meet the requirements for the degree of bachelor of arts in three and one-half years, and a few exceptionally strong men in each class may do it in three years. But in case they are within half a year of graduation at the beginning of the fourth year, we allow them to enter any one of our professional schools and continue half work in the Literary Department. Having planned their course in advance, they have always elected some studies—the law students, constitutional history, the medical students, biology and chemistry,—which either form a part of the professional course or are closely allied to it. Thus they are able without overwork or cramming to complete the college course and the first year's course in the law school or the medical school. This plan, which has been followed several years, has worked on the whole satisfactorily. Of course, it could be followed only by a University which has upon the same grounds its collegiate and its professional departments.

A careful inspection of certain statistics of this University seems to indicate that the number of men who leave the college to go to professional study is not so great as some have supposed. A collation of the records of classes graduating from 1870 to 1877 inclusive, shows that 31 per cent of those who were graduated bachelors of arts went afterwards to the professions, while only 14 per cent of those who did not remain to graduate, or who entered as select students, did so. Our records show plainly also that in recent years the proportion of our students, whether having graduated or not, who go to the professions, is considerably smaller than it was from 1870 to 1877. In determining on a policy for the University it is not necessary to give so much relative weight as formerly to the needs of the students who are to take a profession. The engineering students, who form nearly one-sixth of our number, cannot have their course abridged by a day. It might rather be lengthened with profit. We

must consider also with special care the needs of the students, who are seeking large general culture, especially of those who are to become teachers in our higher schools and in colleges. These now form a very large part, probably a majority, of every graduating class. Their fourth year is undoubtedly their most profitable year of study. Not a few of them remain for a fifth year, and gain the master's degree. If they were graduated bachelors in three years, they might, if they chose, remain a fourth year in graduate work. But the temptation to leave would doubtless be too strong to be resisted by a majority of them.

In considering whether we could easily reduce our course by a year, we cannot neglect to consider what would be the effect of such action on education in the west. Without assuming too much for ourselves, we can hardly doubt that if we made the proposed change, our example would compel the smaller colleges in this region and probably tend to bring all the state universities in the west to make the change also. One who is familiar with the range of work now generally done in the western colleges and universities can hardly think that it would be beneficial to the west to reduce the standard of graduation by a year's study, at least until the requirements for admission are considerably raised.

If we were organizing anew a system of education in the west, we should doubtless construct one differing in many particulars from the present. We should be likely to establish secondary schools resembling the German gymnasium, and do in them the work now accomplished in the first year of college, perhaps even that of the second year. The University might then complete its work, as the German university does, in three years. But we must for the present accept the organization of the secondary schools as we find it. If by the adoption of better methods in the lower grades the high schools can receive their pupils at a higher stage of advancement, they may perhaps in due time take off from the hands of the colleges the work of the first year. In this State they have made marked progress in the last few years. It is quite possible that at no distant day the work of the schools will carry the pupils so far that three years may suffice for the University course. But at present it seems best for us to continue our present policy by which students generally continue their work three and a half or four years in the collegiate course, and yet provision is made for allowing competent students to gain a year in the aggregate time usually required for collegiate and professional study.

It is interesting to observe in this connection that the average age of the students who entered the regular courses in the Literary Department this last year is less by a full year or more than the average age of the Freshman classes fifteen years ago. In the decade 1870-1880 the average age on entrance was from nineteen to nineteen and a half years. Last year it was eighteen years and one-eighth of a month. The average age of the men who entered in 1889 was seventeen years seven and a half months, that of the women nineteen years one and five-ninths months. The average age of the students entering on select courses was twenty-four years and three months. That of the men was twenty-three years, three and four-fifths months, that of the women twenty-five years and five months.

The decrease in the age of matriculating students entering on regular courses is due to two causes, first, the improvement in the high schools, and secondly, to the better financial condition of the parents, which enables the students in larger proportion than formerly to come to college without waiting to earn the means of defraying their expenses. The average age

of the select students is high, because a very large part of them are teachers, who, with praiseworthy zeal, come here to supply the defects in their early education, by studying for one or two years. A considerable number of them conclude after remaining here a while to complete their preparation and take the full course and graduate.

The Department of Medicine and Surgery has had a very prosperous year. The faculty have with much energy labored to improve the curriculum in order to meet the ever advancing demands on the part of the medical profession and of the public for more extended and complete medical training. This school has ever been among the foremost in the country in enlarging the scope of medical education. While beneficial changes have been made in the arrangement and organization of the work heretofore done, it has been decided to ask four years professional study as the condition of graduation. For the present, one year of that study may be pursued in a preceptor's office. But students entering on and after 1893 will be required to spend four years in the Medical Department. I am not clear whether the requirement of a year more of preparatory study in certain sciences and the continuance of the old three years' course might not have been better. But the alternative was not open to us. The state of Illinois and some other western states, in which many of our graduates settle, have passed laws requiring four years of medical study as the condition of being admitted to practice. It is probable that the better and stronger schools in the country will generally provide a four years' course. It is gratifying but not surprising to know that every extension of our course has had a decided influence in bringing us students with better and better preparation. Nearly all who applied for admission this year had at least completed a good high school course.

Since many schools will not establish a four years' course, and since indeed many will continue to graduate students as doctors of medicine, who have had only two courses of six months each or even less, we had expected for the present a considerable falling off in attendance. But it is gratifying to be able to say that in this respect we have been disappointed and surprised. The number of medical students will be larger this year than it was last year. There can be no doubt that the sentiment of the medical profession has been in advance of that of most of the schools in respect to the proper standard of medical education. But so long as the professors are directly dependent for their salaries on the fees of students, many schools will give insufficient training by short courses in order to draw students.

The Board of Regents have spent much time and labor during the year in securing plans for the new hospitals, which are to be erected during the coming year. Through the liberality of the last legislature which appropriated fifty thousand dollars, and of the city of Ann Arbor which appropriated twenty-five thousand dollars, the sum of seventy-five thousand dollars was available for the purchase of a site and the construction of the buildings. An excellent site, comprising nearly ten acres, has been secured at an expense of only nine thousand nine hundred and ninety-one dollars. It has been found impossible to contract for proper buildings without exceeding somewhat the sum furnished us by the State and the city. But the need of the buildings is so urgent that the Board has felt itself constrained to begin the construction. It is hoped the buildings may be ready for occupancy a year hence.

It should be remembered that our hospitals have a double function.

They are primarily intended to furnish illustrations of disease and treatment to our medical students. But they are also in some sense a public charity. Patients are received and treated simply on the payment of their board. Not a few are sent here, who are a public charge on the counties, and who are restored to health and thus enabled to support themselves. There can be no question that it would be a real economy to the State, if provision were made for the care of many more such patients, and if the counties should then avail themselves of the opportunities to make self-supporting citizens of the many now dragging out useless lives in the county almshouses, who could be cured by proper treatment.

The law school has had an attendance which is altogether unprecedented, 533 students. It is becoming a serious question whether it will not soon be necessary to provide ampler accommodations than the law building affords, or reduce the number of students by increasing materially the requirements for admission. It must be admitted that the question of what policy a law school in this part of the country should adopt in fixing the requirements for admission and the requirements for graduation is not so simple as it might at first seem. In Michigan and in several other western states students are admitted to the bar on so easy conditions that if a law school sets up very high standards the great mass of students may go to the bar after brief and perfunctory study in offices and with very little systematic training. It may be argued that the school thus misses its aim of improving the bar, and that it would better accomplish its legitimate end by receiving even illiterate men, who will at any rate find their way into the profession, and by giving them the best training they are capable of receiving. This argument is not without plausibility. But if applied logically to the whole work of the University, it would lead to the lowering of our requirements for admission and for graduation to those of the weaker institutions in the west. We profess and aim to be an institution of higher learning. We have already a reputation which gives weight and influence to our example. If we courageously, but not too rapidly, elevate our standards, we can hold as many students to them as we need care to have. The attainments and the mental discipline of the men we graduate will commend our work to all men of proper aspirations. By sending men of good general, as well as professional, education through all the west, we shall most effectively do our part in creating a sentiment in the profession which will insist on substantial requirements everywhere for admission to the bar.

Nothing in the condition of the other departments calls for special comment here. The work of them all has gone on quietly and successfully.

In our scientific laboratories a considerable amount of research has been carried on. The results have been made public through professional and scientific journals. Our professors, we are glad to say, recognize the fact that they owe a debt, not only to their classes, but also to the sciences which they cultivate. They aspire not only to teach, but also to extend the boundaries of knowledge by original investigation. If a university like this is to fulfill its true function, and maintain a worthy reputation as a home of learning, it must aim to leave to its teachers some time and opportunity for original research. Such men bring to their class-room the inspiring enthusiasm of those who have knowledge at first hand. They stimulate their pupils to work with the same fresh and robust spirit. Their scholarship is eminently reproductive.

From the report of the librarian the following facts are gathered: The

number of volumes in all the libraries is 74,599; of unbound pamphlets 14,907; of maps, 571. The increase during the University year has been 4,558 volumes, 281 pamphlets, 57 maps. The number of volumes drawn for use in the room of the General Library was 131,874, an increase of 46,000 over the preceding year. This number does not include the books used in the Seminary rooms. Of these no record can be kept. I believe that no other library of its size is so much used as ours.

The report of the Curator of the Museum of Zoölogy, Archæology and Ethnology shows that there has been a considerable addition to the collections, due to the generosity of several persons and to the expenditure of a moderate sum in purchases. Valuable work has been done in the identification of shells and in preparing a catalogue of our birds. The unoccupied room in the third story of the museum should be at once provided with cases for the reception of specimens now packed away in boxes.

The museum of the Department of Medicine and Surgery is in sore need of ampler accommodations. An addition to the medical building may be necessary to afford the needed room.

Concerning the other museums there is nothing of special importance to report.

In previous reports I have made grateful mention of the efforts which various branches of the Christian church have made to assist in providing for the religious wants of students by the establishment of guilds or societies and by other appropriate means. These efforts have attracted much attention from those who have been interested in the problems of religious life in universities and especially in state universities. It gives me pleasure to say that the Presbyterians, through the generosity of one of their laymen, to whose liberality the University has been largely indebted heretofore, Hon. James McMillan, are now erecting a fine building to be connected with Tappan Hall, which has been in use during the past year for the religious assistance of students. A considerable number of distinguished preachers have been brought to the pulpits of the city by the different churches.

I am also very glad to report that a new general catalogue of the graduates of the University is far advanced towards completion. During the past year Professors Demmon and Pettee, with the aid of clerks, have been engaged in the difficult and laborious task of preparing this work and carrying it through the press. No pains have been spared to make it as accurate as such a catalogue can be. Our records have been most carefully collated and extensive correspondence has been carried on in order to obtain the information needed. The work has been so thoroughly done that a large part of the matter will be available without change for all future editions. It will appear from this volume that (without counting the recipients of honorary degrees) more than ten thousand persons have been graduated here. The record will furnish most impressive evidence of the greatness of the work already accomplished by the University.

I beg leave to speak briefly of some of the pressing needs of the University.

We still need an ample field for the athletic exercises of the students. Ten or fifteen acres should be secured. As one or two opportunities now present themselves to procure land not very far from our grounds, it is to be hoped that means will be found for the purpose. Some expenditure would have to be incurred in enclosing the field and preparing it suitably for use. It is superfluous to say in this connection that a spacious gym-

nasium would also conduce greatly to the health of our students. But I trust we shall not make the mistake of accepting even as a gift an inadequate sum for such a building. A structure too small or unsuitably equipped would be worse than none. It must also be remembered that a considerable annual expense, at least three thousand dollars, possibly four thousand, will be needed to pay the salary of a suitable director, and to meet the cost of maintenance of such a gymnasium as we ought to have.

If, as seems to me wise, on the completion of the new hospitals, the Dental College is removed to the building now used as the University Hospital, the engineering work at present mainly done in the south wing of University Hall should be transferred to the building now occupied by the dental college. The proximity of that building to the physical laboratory and the engineering shops, makes that arrangement judicious. These removals will involve considerable expense, as special adaptations of the buildings to their new uses will have to be made.

One of our most pressing needs is the lack of suitable zoölogical, botanical, and geological laboratories. In all good institutions the laboratory method of the study of the biological sciences and of geology have supplanted the old methods, certainly for advanced students. We are carrying on this laboratory work under serious disadvantages from limited and inconvenient quarters in rooms which were not constructed for such purposes. We must soon have more room somewhere, and the laboratories should be near the scientific collections. When our museum building was erected, it was planned with a view of receiving an addition for such purposes. It is believed that laboratories could be added upon the east side suitable to meet our wants for some years at a cost of about \$50,000. It is hoped that at an early day the regents will have the means at their disposal for these much needed accommodations. Perhaps nowhere else are we so weak just now in comparison with the better universities as in the means for teaching the branches referred to in the most effective manner.

So far as the attendance of students is concerned the prosperity of the University exceeds any expectation which we cherished a few years ago. We cannot but be gratified. We cannot but think that the State of Michigan, whose liberality has made this success possible, is gratified. But we who are charged with the administration of the institution find ourselves somewhat embarrassed by its rapid growth. The large increase in our classes make a call for more room and for more teachers. The conspicuousness which it gives to this university makes it, if possible, a more imperative need than existed before, that we should in no branch of instruction fall behind. We are confident that Michigan expects that we shall prove ourselves worthy of the eminence which we have attained, and furnish to her sons and daughters opportunities for thorough and generous training second to none which are offered by the foremost schools of America.

Remembering with grateful appreciation what she has done to aid the University in the past, we cherish no doubt that she will, with generous hand, aid it in the future to secure and maintain that pre-eminent position among the universities of this country which is so easily within its reach.

JAMES B. ANGELL.

APPENDIX A.

FINANCE REPORT.

To the Honorable Board of Regents:

Your finance committee would herewith respectfully submit the annual statement of the treasurer, showing receipts and expenditures for the fiscal year ending June 30, 1890, and with the same, the estimates of receipts and expenditures for the ensuing year.

Your committee has caused a careful examination to be made of the books and vouchers of the treasurer by a competent expert, and the same have been found substantially correct. The errors, very few in number, considering the large variety of transactions, are not such as to cause loss to the institution, and have been duly corrected in his accounts. Owing to the large increase of receipts from students' fees, the balance on hand at the end of the year was larger than estimated. Your committee would, however, remind the board that a very large increase of expenditures for the ensuing year has already been made necessary by appropriations voted by the board since the opening of the present fiscal year, and that every session brings its necessities. We believe that it cannot be too carefully borne in mind that an important element of our strength before the legislature and the people of the State has been the unusual care exercised by this board in the expenditure of its funds, both general and special.

Respectfully submitted.

CHARLES J. WILLETT, *Chairman.*
HERMAN KIEFER.

ESTIMATED RECEIPTS.

Balance in Treasury July 1, 1890.....	\$82,134 84
To be received from University interest.....	38,500 00
“ “ “ 1-20 mill tax.....	47,272 50
“ “ “ for Homœopathic College and Hospital.....	14,200 00
“ “ “ college of Dental Surgery.....	10,000 00
“ “ “ contingent expenses.....	8,000 00
“ “ “ books for libraries.....	7,500 00
“ “ “ repairs.....	5,000 00
“ “ “ from erection of new hospital (from State).....	40,000 00
“ “ “ “ “ (from Ann Arbor city).....	25,000 00
“ “ “ interest on bank deposits.....	3,000 00
“ “ “ sale of dental supplies.....	3,000 00
“ “ “ sales at University Hospital.....	1,500 00
“ “ “ sales at Homœopathic Hospital.....	200 00
“ “ “ students' fees.....	100,000 00
	<hr/>
	\$385,307 34

ESTIMATED DISBURSEMENTS.

Salaries in Dental College.....	\$8,250 00
“ “ Homœopathic College and Hospital.....	11,200 00
“ “ University Hospital.....	2,500 00
“ “ all other departments.....	155,000 00
For alterations and repairs.....	5,000 00
“ fuel and lights.....	12,000 00
“ care of grounds.....	500 00
“ postage.....	1,200 00
“ insurance.....	2,000 00
“ calendar, regents' proceedings, and miscellaneous printing.....	3,000 00
“ current expenses for general library.....	500 00
“ “ “ museum.....	700 00
“ “ “ in department of civil engineering.....	1,000 00
“ “ “ of astronomical observatory.....	3,000 00
“ “ “ hygienic laboratory.....	1,000 00
“ “ “ dental department.....	1,750 00
“ supplies for chemical laboratory.....	10,000 00
“ “ “ botanical “.....	600 00

For supplies for histological laboratory.....	\$500 00
" " " physiological ".....	500 00
" " " engineering ".....	1,500 00
" " " physical ".....	800 00
" " " zoological ".....	600 00
" " " general chemistry.....	1,000 00
" " " dental college.....	3,000 00
" " " University hospital.....	3,500 00
" " " Homœopathic college and hospital.....	3,000 00
" " " pathological laboratory.....	600 00
" anatomical material.....	2,500 00
" use of water privilege.....	600 00
" purchase and filling of diplomas.....	1,000 00
" commencement expenses.....	1,200 00
" taxes and improvements on lots in Detroit.....	400 00
" expenses on general catalogue.....	3,000 00
" purchase of books for libraries.....	7,500 00
" erection of new hospital.....	65,000 00
" contingent expenses.....	8,000 00
Balance on hand June 30, 1891.....	61,907 34
	<u>\$385,307 34</u>

TREASURER'S REPORT.

To the Finance Committee, Board of Regents, University of Michigan:

GENTLEMEN—Herewith I submit my annual report for the year ending June 30th, 1890.

Respectfully,

H. SOULE, *Treasurer.*

Receipts.

Balance in treasury, July 1st, 1889.....		\$15,617 93
From State Treasurer account current expenses.....	\$ 85,923 50	
From State Treasurer account special appropriations.....	147,589 08	
From earnings account special fund.....	14 90	
From earnings of the University.....	111,162 75	344,690 23
		<u>\$380,308 16</u>

Disbursements.

Paid general fund accounts.....	\$175,813 83	
Paid special fund accounts.....	102,359 49	\$278,173 32
Balance in the treasury, June 30th, 1890.....		82,134 84
		<u>\$360,308 16</u>

The following detailed and classified statements exhibit the condition of the several funds:

GENERAL FUND.

RECEIPTS TO THE GENERAL FUND.

Balance in treasury, July 1st, 1889.....		\$28,911 65
From State Treasurer account 1-20 mill tax.....	\$47,272 50	
" " " University interest.....	38,651 00	
" sale of material " University hospital.....	2,299 38	
" " " Homœopathic hospital.....	249 80	
" " " dental operating room.....	3,795 70	
" " " to medical schools.....	242 47	
" first national bank of Ann Arbor, interest.....	3,194 73	
" miscellaneous sources.....	565 57	96,271 33

PUBLIC INSTRUCTION.

For students' fees account	Medical Department.....	\$14,630 00	
" " " "	Literary "	30,870 00	
" " " "	Law "	23,720 00	
" " " "	Dental "	3,740 00	
" " " "	Homœopathic Department....	2,665 00	
" " " "	chemical laboratory.....	9,595 40	
" " " "	mechanical "	972 00	
" " " "	pharmacy "	3,345 00	
" " " "	key deposits.....	193 00	
" " " "	general chemistry.....	198 00	
" " " "	practical anatomy.....	2,750 00	
" " " "	botanical laboratory.....	345 00	
" " " "	physiological "	63 00	
" " " "	zoological "	114 00	
" " " "	histological "	693 00	
" " " "	pathological "	323 00	
" " " "	hygienic "	957 52	
" " " "	diplomas.....	5,641 00	\$100,814 92
students' fees, total.....		\$100,814 92	
" " refunded.....		4,932 13	
Net.....		\$95,882 79	
Cost of anatomical laboratory refunded (transfer from special account).....			\$225,997 90
			7,968 63
			<u>\$233,956 53</u>

DISBURSEMENTS FROM THE GENERAL FUND.

General pay roll of officers, professors, and employées.....	\$137,782 96	
Vouchers paid account students' fees refunded.....	4,932 13	
" " " fuel and lights.....	8,602 99	
" " " general library.....	254 23	
" " " museum	223 53	
" " " advertising Medical Department.....	127 49	
" " " Law	149 51	
" " " Pharmacy "	51 00	
" " " miscellaneous printing.....	1,199 23	
" " " civil engineering.....	197 05	
" " " chemical laboratory.....	8,226 19	
" " " histological "	250 00	
" " " botanical "	366 58	
" " " physical "	40 92	
" " " physiological "	91 57	
" " " mechanical "	1,254 11	
" " " zoological "	262 12	
" " " pathological "	357 04	
" " " hygienic "	81 74	
" " " anatomical "	1,852 44	
" " " general chemistry.....	897 56	
" " " astronomical observatory.....	61 08	
" " " dental operating rooms.....	2,825 98	
" " " dental college.....	25 00	
" " " postage	1,192 22	
" " " calendar	2,340 34	
" " " contingent expenses.....	645 82	
" " " insurance	1,523 00	\$175,813 83
Balance in treasury, June 30th, 1890.....		58,142 70
		<u>\$233,956 53</u>

SPECIAL FUND ACCOUNTS.

HOMOEOPATHIC MEDICAL COLLEGE.

Receipts.

Balance in treasury, July 1st, 1889.....	\$1,472 68	
From State Treasurer.....	3,000 00	\$4,472 68

Disbursements.

Paid salaries of professors and employees.....	3,867 50	
Balance in treasury June 30th, 1890.....	605 18	4,472 68

HOMOEOPATHIC MEDICAL COLLEGE AND HOSPITAL.

Receipts.

From State Treasurer.....	12,200 00	
Balance overdrawn June 30th, 1890.....	757 97	12,957 97

Disbursements.

Balance overdrawn July 1st, 1889.....	1,972 49	
Paid salaries of professors and employees.....	7,122 50	
Paid vouchers for expenses.....	3,862 98	12,957 97

GENERAL LIBRARY.

Receipts.

Balance in treasury July 1st, 1889.....	853 20	
From State Treasurer.....	7,500 00	
Balance overdrawn June 30th, 1890.....	529 68	8,882 88

Disbursements.

Paid vouchers for expenses.....	8,882 88	8,882 88
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UNIVERSITY HOSPITAL.

Receipts.

From State Treasurer.....	6,000 00	
Balance overdrawn June 30th, 1890.....	1,347 07	7,347 07

Disbursements.

Balance overdrawn July 1st, 1889.....	2,050 40	
Paid salaries of resident physician and employees.....	1,968 75	
Paid vouchers for expenses.....	3,327 92	7,347 07

CONTINGENT.

Receipts.

From State Treasurer.....	17,500 00	17,500 00
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Disbursements.

Balance overdrawn July 1st, 1889.....	423 44	
Paid vouchers for expenses.....	14,845 80	
Balance in treasury, June 30th, 1890.....	2,230 76	17,500 00

REPAIRS.

Receipts.

Balance in treasury July 1st, 1889.....	629 35	
From State Treasurer.....	4,000 00	
Balance overdrawn June 30th, 1890.....	799 40	5,428 75

PUBLIC INSTRUCTION.

Disbursements.

Paid vouchers for expenses.....	\$5,428 75	\$5,428 75
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PHYSIOLOGICAL LABORATORY.

Receipts.

Balance in treasury July 1st, 1889.....	152 14	152 14
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Disbursements.

Paid vouchers for expenses.....	137 17	
Balance in treasury June 30th, 1890.....	14 97	152 14

ENGINEERING LABORATORY.

Receipts.

Balance in treasury.....	946 04	946 04
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Disbursements.

Paid vouchers for expenses.....	605 81	
Balance in treasury June 30th, 1890.....	340 23	946 04

DEPARTMENT OF NATURAL PHILOSOPHY.

(PHYSICAL LABORATORY.)

Receipts.

Balance in treasury July 1st, 1889.....	992 65	992 65
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Disbursements.

Paid vouchers for expenses.....	790 68	
Balance in treasury June 30th, 1890.....	201 97	992 65

GOETHE FUND.

Receipts.

Balance in treasury July 1st, 1889.....	463 41	
From interest on deposit.....	10 43	473 84

Disbursements.

Paid vouchers for expenses.....	473 84	473 84
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COLLEGE OF DENTAL SURGERY.

Receipts.

From State Treasurer.....	15,000 00	15,000 00
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Disbursements.

Balance overdrawn July 1st, 1889.....	4,503 48	
Paid salaries of professors and employees.....	8,650 00	
Paid vouchers for expenses.....	947 40	
Balance in treasury June 30th, 1890.....	899 12	15,000 00

SCIENTIFIC LABORATORIES.

Receipts.

Balance in treasury July 1st, 1889.....	925 30	925 30
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Disbursements.

Paid vouchers for expenses.....	150 02	
Balance in treasury June 30th, 1890.....	775 28	925 30

REMOVAL OF ROGERS' GIFTS.

Receipts.

From State Treasurer.....	\$5,000 00	\$5,000 00
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Disbursements.

Balance overdrawn July 1st, 1889.....	4,841 81	
Balance in treasury June 30th, 1890.....	158 19	5,000 00

COMPLETION OF ENGINEERING LABORATORY.

Receipts.

From State Treasurer.....	2,000 00	2,000 00
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Disbursements.

Paid vouchers for expenses.....	1,866 37	
Balance in treasury June 30, 1890.....	133 63	2,000 00

COMPLETION OF BOILER HOUSE AND STEAM CONNECTIONS.

Receipts.

From State Treasurer.....	5,930 45	
From earnings.....	4 47	5,934 92

Disbursements.

Balance overdrawn July 1, 1889.....	5,934 92	5,934 92
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CONSTRUCTION OF THE ANATOMICAL LABORATORY.

Receipts.

From State Treasurer.....	7,958 63	7,958 63
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Disbursements.

Transferred to and accounted for in general account.....	7,958 63	7,958 63
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EQUIPMENT OF ENGINEERING LABORATORY.

Receipts.

From State Treasurer.....	7,000 00	7,000 00
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Disbursements.

Paid vouchers for expenses.....	5,215 80	
Balance in treasury June 30, 1890.....	1,784 20	7,000 00

CIVIL ENGINEERING.

Receipts.

From State Treasurer.....	2,000 00	2,000 00
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Disbursements.

Paid vouchers for instruments.....	802 50	
Balance in treasury June 30, 1890.....	1,197 50	2,000 00

ENLARGEMENT OF DENTAL COLLEGE.

Receipts.

From State Treasurer.....	3,000 00	3,000 00
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Disbursements.

Balance in treasury June 30, 1890.....	3,000 00	3,000 00
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PUBLIC INSTRUCTION.

UNIVERSITY FENCE.

Receipts.

From State Treasurer.....	\$500 00	\$500 00
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Disbursements.

Paid vouchers for expenses.....	500 00	500 00
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ADDITION TO CHEMICAL LABORATORY.

Receipts.

From State Treasurer.....	21,000 00	21,000 00
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Disbursements.

Paid vouchers for expenses.....	20,302 66	
Balance in treasury June 30, 1890.....	697 34	21,000 00

HYGIENIC LABORATORY.

Receipts.

From State Treasurer.....	3,000 00	
Balance overdrawn June 30, 1890.....	539 21	3,539 21

Disbursements.

Balance overdrawn July 1, 1889.....	1 95	
Paid vouchers for expenses.....	3,537 26	3,539 21

NEW HOSPITALS.

Receipts.

From State Treasurer.....	25,000 00	25,000 00
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Disbursements.

Paid vouchers for expenses.....	9,072 90	
Balance in treasury June 30, 1890.....	15,927 10	25,000 00

SPECIAL FUNDS.

The balances in the treasury June 30, 1890, are as follows:

Homœopathic medical college.....	\$605 18	
Contingent.....	2,230 76	
Physiological laboratory.....	14 97	
Engineering laboratory.....	340 23	
Department of natural philosophy (physical laboratory).....	201 97	
College of dental surgery.....	899 12	
Scientific laboratories.....	775 28	
Removal of Rogers' gifts.....	158 19	
Completion of engineering laboratory.....	133 63	
Equipment of engineering laboratory.....	1,784 20	
Civil engineering (instruments).....	1,197 50	
Enlargement of dental college.....	3,000 00	
Addition to chemical laboratory.....	697 34	
New hospitals.....	15,927 10	\$27,965 47
Less overdrawn accounts Homœopathic college and hospital.....	\$757 97	
" " " University hospital.....	1,347 07	
" " " general library.....	529 68	
" " " repairs.....	799 40	
" hygienic laboratory.....	539 21	3,973 33
Amount of special funds in treasury.....		\$23,992 14
Amount of general fund in treasury.....		58,142 70
June 30, 1890, total.....		\$82,134 84

GIFTS.

The regents have from time to time received in various forms valuable gifts from friends of education, and in later years money gifts for stated special purposes. These gifts have been until this time merged with and accounted for in all reports as of and with the general University moneys. This not being in accord with the wishes of the donors, these sums have been withdrawn from the general fund and made a special account, which will be kept separate and administered under direction of the board of regents, and agreeably to the wishes of the donors. The account is as follows :

PHILO PARSONS FUND.

Receipts.

Balance received by the treasurer March 20, 1886	\$ 80 95	
Interest on the same to March 30, 1890	11 12	
" " " " June 30, 1890	92	\$ 92 99

Disbursements.

Balance in treasury June 30, 1890	92 99	92 99
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MARY J. PORTER FUND.

Receipts.

Proceeds of Mary J. Porter fund received March 24, 1887	500 00	
Interest on the same to March 30, 1890	53 75	
" " " " June 30, 1890	5 54	559 29

Disbursements.

Balance in treasury June 30, 1890	559 29	559 29
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GOETHE FUND.

Receipts.

Balance in treasury July 1, 1889. (Unexpended balance of collections made by Professor Calvin Thomas)	463 41	
Interest on the same to March 30, 1890	10 43	
" " " " June 30, 1890	4 73	478 57

Disbursements.

Balance in treasury June 30, 1890	478 57	478 57
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ELISHA JONES CLASSICAL FELLOWSHIP.

Receipts.

From Mrs. Elisha Jones October 2, 1889	250 00	
" " " " February 17, 1890	250 00	500 00

Disbursements.

Paid voucher to Herbert De Cou October, 1889	250 00	
" " " " March, 1890	250 00	500 00

BALANCES IN TREASURY.

Philo Parsons fund	92 99	
Mary J. Porter "	559 29	
Goethe "	478 57	1,130 35

APPENDIX B.

EXAMINATION FOR DEGREES.

The following examinations were held in 1890:

CANDIDATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

HAJOB HARUTUNE ACTERIAN, A. B.

Thesis.—The Theory of the Unknowable in the Philosophy of Herbert Spencer. Subjects for examination: Major—History of Philosophy. Minors—1. History. 2. Logic.

EPHRAIM DOUGLASS ADAMS, A. B.

Thesis.—The Budget in the United States. Subjects for examination: Major—History. Minors—1. Philosophy. 2. Political Economy.

FREDERICK CHARLES HICKS, A. B.

Thesis.—The Foreign Trade of the United States. Subjects for examination: Major—Political Economy. Minors—1. Political Philosophy. 2. Finance.

CANDIDATES FOR THE DEGREE OF DOCTOR OF SCIENCE.

FREDERICK GEORGE NOVY, M. S.

Thesis.—The Toxic Products of the Bacillus of Hog Cholera. Subjects for examination: Major—Physiological Chemistry. Minors—1. Hygiene. 2. Chemistry of the Alkaloids.

CANDIDATES FOR THE DEGREE OF MASTER OF ARTS.

BENJAMIN PARSONS BOURLAND, A. B.

Thesis.—A Comparative Study of the Greek and Roman Systems of Colonization. Subjects for examination: Major—Greek. Minors—1. Latin. 2. History.

HERBERT FLETCHER DE COU, A. B.

Thesis.—Studies in Greek and Roman Numismatics. Subjects for examination: Major—Greek. Minors—1. Latin. 2. Classical Archæology.

MARY LOUISA HINSDALE, A. B.

Thesis.—The Rise of the Reformation in France. Subjects for examination: Major—History. Minors—1. English Literature. 2. Greek.

ELLA ADELAIDE KNAPP, A. B.

Thesis.—Optimism in the works of Nathaniel Hawthorne. Subjects for examination: Major—English Literature. Minors—1. History. 2. Latin.

WILLIAM CLARENCE MCCOLLOUGH.

Thesis.—Roman Comedy, with special reference to the plays of Plautus and Terence. Subjects for examination: Major—Latin. Minors—1. Greek. 2. German.

CAROLINE MILES, A. B.

Thesis.—New England Transcendentalism as a Philosophy: Subjects for examination. Major—Philosophy. Minors—1. History. 2. German.

WILLIAM FRANCIS PALMER, A. B.

Thesis.—The preposition *ἵπρος*. Subjects for examination: Major—Greek. Minors—1. Latin. 2. Pedagogy.

FLORA MABEL POTTER, A. B.

Thesis.—Traces of Puritan Influence in Bryant, Emerson and Hawthorne. Subjects for examination: Major—American Literature. Minors—1. Political Economy. 2. Philosophy.

ALDRED SCOTT WARTHIN, A. B.

Thesis.—Music and the Drama. Subjects for examination: Major—English Literature. Minors—1. Music. 2. German.

ARLISLE MARGARET YOUNG, A. B.

Thesis.—The Influence of Rousseau upon Wordsworth. Subjects for examination: Major—English Literature. Minors—1. Latin. 2. Philosophy.

CANDIDATES FOR THE DEGREE OF MASTER OF PHILOSOPHY.

LUCY CASTINY MCGEE, B. S.

Thesis.—The Influence of Plato on Edmund Spenser. Subjects for examination: Major—English Literature. Minors—1. History. 2. Philosophy.

HENRY ALVIN PARKER, PH. B.

Thesis.—The Growth of the English Historical Drama. Subjects for examination: Major—English Literature. Minors—1. History. 2. Philosophy.

CANDIDATES FOR THE DEGREE OF MASTER OF SCIENCE.

NATHAN DAVIS CORBIN, B. S.

Thesis.—Proportional Representation. Subjects for examination: Major—History. Minors—1. Political Economy. 2. Political Philosophy.

ELSIE M. HADLEY, B. S.

Thesis.—Sphero-Conics. Subjects for examination: Major—Mathematics. Minors—1. Astronomy. 2. English Literature.

WILL HITTELL SHERZER, B. S.

Thesis.—Chonophyllum. Subjects for examination: Major—Rugosa and Tabulata. Minors—1. Qualitative Chemical Analysis. 2. Microscopic Petrography.

UNDERGRADUATES, CANDIDATES FOR BACHELORS' DEGREES IN THE UNIVERSITY SYSTEM.

BACHELOR OF PHILOSOPHY.

HARRY MOORE BATES.

Subjects for examination: Major—History. Minors—1. English Literature. 2. Political Science.

HORACE VAN DEVENTER.

Subjects for examination: Major—History. Minors—1. English Literature. 2. Political Science.

BACHELOR OF SCIENCE.

HAROLD WELLMAN FAIRBANKS.

Subjects for examination: Major—Lithological Geology. Minors—1. Mineralogy. 2. Geological Chemistry.

APPENDIX.

The following tables are based on data contained in the General Catalogue of Alumni, now passing through the press. No deductions are made for cases where two or more degrees have been taken by the same person. The total number of different persons who have received degrees is 10,123.

These tables include the degrees conferred by the Board of Regents at their meeting of December 12, 1890.

Tabular Summary of Degrees Conferred in the Department of Literature, Science, and the Arts, since the Organization of the University.

Year.	Ordinary degrees.															Higher degrees in course.			Higher degrees on examination.							Total.	
	A. B.	A. M. without previous A. B.	Ph. B.	Ph. M. without previous Ph. B.	B. S. (general.)	B. L.	M. L. without previous B. L.	C. E.	B. S. (civil eng.).	M. E.	B. S. (mining eng.).	B. S. (mech. eng.).	B. S. (elect. eng.).	B. S. (chem.).	B. S. (biol.).	A. M.	Ph. M.	M. S.	A. M.	Ph. M.	M. S.	Ph. D.	Sc. D.	C. E.	M. E.		Mech. E.
1845.	12																										12
1846.	17																										17
1847.	12																										12
1848.	16																										16
1849.	24																										26
1850.	12															2											17
1851.	10															4											14
1852.	10															7											17
1853.	11															4											15
1854.	21															18											39
1855.	15				2																						17
1856.	20															4											24
1857.	28				7											8											43
1858.	30				20											9											59
1859.	27				12											13				1							54
1860.	21				13			2								25			2								63
1861.	37				16			3								17			3	2							73
1862.	37				11			1								15			4	1	2						71
1863.	23				6			5								9			1	2							46
1864.	22				3			1								12			5	1							44
1865.	21				5			6								28			7								67
1866.	32				6			7								19			5								69
1867.	26				10			6								5			5	1							55
1868.	35				5			11	2							14			2								73
1869.	23				9			10	6							17			1	1							68
1870.	41	1	7		16			12	7							21			4	1							106
1871.	36		6		8			18	3							17			1	1							86
1872.	58		7		12			10	1							11			7								106
1873.	40		15		12			11	1							18			8	1							105
1874.	35		14		13			14								18			2	2							98
1875.	42		21		18			20								27	2		4	3	1						188
1876.	38		13		14			11								31	6		7		1	1	2				123
1877.	40		19		11			6								23	3		2	2	1	1					108
1878.	41		9		5			14	4										2	1			1				77
1879.	36	1	11		4			5	3										7	1	1		1				70
1880.	32	6	16		2	3		4	3										1	2		1	1				70
1881.	54	5	15	1	5	2		9											4			1					96
1882.	40		19	1	6	8	1	3											4		8		2				87
1883.	52	2	17	1	2	3	1	6			1								8	1	3	1					98
1884.	52	5	14	1	2	10		5											8		3		2				102
1885.	37	2	16		7	11	1	6			1								4		1					1	87
1886.	50		13		8	5		10			2	1			2				4			3					100
1887.	44		18		9	10		10			1	6							6	1	2	2					109
1888.	54		19		9	18		13			1	7			4				6	2		3					136
1889.	35		28		7	15		9			4	6			3				4		2	1	2	1			115
1890.	51		29		10	20		12			1	4	3	3	1				10	2	3	5	1	1	1		155
Total.	1,450	22	326	4	305	105	3	184	74	30	9	26	3	9	4	401	11	70	87	11	24	2	23	2	1	1	3,188

Tabular Summary of Degrees Conferred by the University since its Organization, Arranged by Years and by Departments.

Year.	Department of literature, science, and the arts.			Department of medicine and surgery.—Degree of M. D.	Department of law.		School of pharmacy.		Homoeopathic Medical College.—Degree of M. D.	College of Dental Surgery.—Degree of D. D. S.	Honorary degrees.	Total.
	Ordinary degrees.	Advanced degrees in course.	Advanced degrees on examination.		Degree of LL. B.	Degree of LL. M.	Degree of Ph. C.	Degree of Ph. M.				
1845	12											12
1846	17											17
1847	12											12
1848	16											16
1849	24	2										26
1850	12	5										17
1851	10	4		6								20
1852	10	7		27							2	46
1853	11	4		54								49
1854	21	18		41								89
1855	17			23								40
1856	20	4		30								54
1857	35	8		27								70
1858	50	9		29								88
1859	38	13	2	24								78
1860	36	27		21	24							108
1861	56	20	2	43	44							165
1862	49	19	3	86	44							154
1863	34	10	2	32	43							126
1864	28	17	1	51	71							168
1865	32	35		71	80						1	219
1866	45	24		74	109						2	254
1867	44	10	1	82	146						1	284
1868	57	16		81	152						4	310
1869	49	18	1	98	129		23				3	321
1870	80	25	1	86	120		28				3	343
1871	67	18	1	62	117		21				2	308
1872	88	18		89	142		5				3	345
1873	78	26	1	91	123		9				2	380
1874	76	20	2	71	127		20				1	317
1875	101	38	4	79	136		18				2	373
1876	76	44	3	98	159		31			9		415
1877	76	28	4	84	122		28		13	10	1	366
1878	73		4	98	148		22		22	14	1	332
1879	60		10	104	193		25		25	15	5	437
1880	66	4		92	175		24		19	34	3	417
1881	91		5	101	145		33		23	37	7	442
1882	73		9	91	170		40		16	32	4	440
1883	85		13	117	155		37		16	26	5	454
1884	89		13	85	134		38		20	25	2	406
1885	81		6	80	136		26		6	28	4	367
1886	93		7	83	116		29		17	30	4	373
1887	96		11	81	154		23		13	27	19	433
1888	125		11	65	146		23		13	38	3	424
1889	105		10	82	147		41		21	34	3	443
1890	134		21	89	212	6	33		22	38	5	560
Total	2,554	482	152	2,676	3,924	6	577	1	246	397	92	11,107

STATE BOARD OF EDUCATION.

To the Honorable, the Legislature of the State of Michigan :

In accordance with the requirements of Section 10, Act 194 of the Public Acts of 1889, we hand you our report for the two years ending June 30, 1890.

You are aware of the change in the membership of the Board caused by the retirement of Hon. Bela W. Jenks, who was for so long a time its respected president, and whose faithful services to the State cannot be too highly commended; and the election of the Hon. Perry F. Powers to succeed him.

Act 194 of the laws of 1889 changed somewhat the duties of the Board, and we have, we trust, fully met all its requirements.

STATE NORMAL SCHOOL.

An examination of the report of the principal of the school, herewith submitted, will give you full information concerning the school so far as the same has been under his immediate direction and control.

We heartily indorse the recommendations he has made, and trust the Legislature will give them careful consideration and place the means in our hands with which to carry them out.

The report of the Treasurer of the Board, also herewith submitted, will fully inform you as to the moneys received and expended. We also submit an estimate of the amount of money required for the running expenses of the school during the next two years. This estimate has been made after careful consideration, and we think that not a dollar has been asked for that is not absolutely needed.

We also append to our report an inventory of the property belonging to the school.

Four vacancies have occurred in the faculty since our last report: Miss Helen M. Post, assistant in the grammar and French departments; Mr. Willis A. Weeks, assistant in Latin and French, and Mrs. Lydia E. Kniss, instructor in history, resigned their respective situations. Miss Amelia Hale, instructor in mathematics, was removed by death.

The following new teachers have been employed: Miss Helen B. Muir, assistant in Latin and Greek; Miss Nina C. Vandewalker, critic in primary grades; Miss Lillian Crawford, teacher in model primary; Miss Mary Lockwood, kindergartner; Miss Ella M. Hayes, instructor in mathematics, and Miss Nellie M. Stirling, instructor in history.

The additions provided for by the Legislature of 1887 have been occupied during the last two years, and have furnished the additional room which was so much needed.

The Board have inaugurated the system of free text-books in the school and the results of such action are highly gratifying.

The training school has been greatly enlarged and improved. A kindergarten department has been added, and has been fully equipped. It is in charge of an experienced and competent kindergartner, and the results already attained prove the wisdom of our action.

A model primary school as a department of observation has been established, and has proved a great advantage to the students of the Normal School.

BOARD OF VISITORS.

In compliance with the provisions of law relative thereto, we appointed for the year 1888-9, Rev. Theodore Nelson, LL. D., of Saginaw City; Superintendent C. T. Grawn, of Traverse City, and Mrs. Mary Fairbank, of Flint, visitors to the school.

For the year 1889-90, we appointed Prof. Orr Schurtz, of Charlotte; Prof. H. C. Rankin, of Lapeer, and C. C. Hopkins, of Lansing, visitors to the school.

The reports of these Boards will be found embodied in the reports of the Superintendent of Public Instruction for the respective years, to which we invite your attention.

STATE CERTIFICATES.

We have held during the past two years four examinations of applicants for State certificates, and have licensed the following named persons, they having passed the examination in all the subjects required by the Board.

Geo. S. Hughes, R. H. Gully, Aurora Wetherbee, Jno. J. Daly, A. McLellan, Silas B. Tobey, Geo. W. Haan.

Prior to the taking effect of the law of 1889 above referred to and subsequent to our last report, the following persons were granted certificates upon theses:

Nina C. Vandewalker, Jas. Warnock, Jr., Julia F. Stoughton, Emma Lamb, Hamilton King.

The law was changed by the last Legislature so as to make all certificates good for life, and abolishing all fees theretofore required of applicants.

The following is a copy of the circular prepared and sent by us to those who apply for examination:

STATE OF MICHIGAN,
STATE BOARD OF EDUCATION. }
.....18....

State certificates will be granted to teachers of approved qualifications in accordance with Section 15 of Act No. 194, Laws of 1889, which reads as follows:

"The State Board of Education shall hold at least two meetings each year, at which they shall examine teachers, and shall grant certificates to such as have taught in the schools of the State at least two years, and who shall, upon a thorough and critical examination in every study required for such certificate, be found to possess eminent scholarship, ability, and good moral character. Such certificate shall be signed by the members of said board, and impressed with its seal, and shall entitle the holder to teach in any of the public schools of this State without further examination, and shall be valid for life unless revoked by said board. No certificate shall be granted except upon the examination herein prescribed:

"*Provided*, That graduates of the literary and scientific departments of the University, and of incorporated colleges of the State, shall not be required to teach as a preliminary to taking such examination and certificate."

The State Board of Education, in order to carry into effect the provisions of this law will require of each applicant for a certificate:

1. Written testimonials from responsible persons as to the moral character of the applicant.

2. Testimonials from present or former employers as to success in teaching.

3. A statement by the applicant, of the length of time he has taught.

4. Each applicant to pass a satisfactory examination in orthography, reading, penmanship, arithmetic, algebra, geometry, grammar, geography, United States history, general history, civil government, theory and art of teaching, physics, physiology and hygiene, botany, zoology, geology, chemistry, rhetoric, general literature, and the school law of Michigan.

Applications should be made at least ten days before the first day of the examination. The length of the examination will be five days. The next examination will be held at the capitol in Lansing, beginning-----at 2 o'clock P. M., and closing on-----

All communications should be addressed to the Secretary of the Board, Lansing, Michigan.

As will be seen from an examination of the circular, we make an exception in favor of those who are graduates from the University and colleges of this State.

The boards of visitors to the other schools of the State, required by law to be appointed by the Superintendent of Public Instruction, and approved by this board have all been selected with care, and almost without exception, have done good and conscientious work for the State.

In attending to the matters which the law makes it obligatory upon us to look after, we have endeavored to merit the approval of the people of the State, and sincerely trust that when your scrutiny of our work is completed we shall have your approval also.

Very respectfully yours,

JAMES M. BALLOU, *President*,
JOSEPH ESTABROOK, *Secretary*.
SAMUEL S. BABCOCK, *Treasurer*.
PERRY F. POWERS.

REPORT OF THE PRINCIPAL

FOR THE SCHOOL YEARS 1888-89 AND 1889-90.

To the State Board of Education:

GENTLEMEN—In compliance with law and custom, I present herewith the following report of the State Normal School for two years as noted above. These have been years of marked prosperity, covering a period of good progress along several lines. I gladly bear testimony to the ability, earnestness, fidelity and skill of the corps of instructors. As to the students, it is not easy to speak too highly of their faithfulness, good order, good sense and professional zeal.

Herewith, I present tables showing the facts of membership, etc., for the period reported upon and offering comparisons with preceding years. It will be seen that I am again able to report an increase in the normal department (exclusive of the training school), of nearly one hundred over the enrollment for the last year included in the biennial report made two years ago. It is also shown that the enrollment for 1889-90 is two hundred and fifty-five per cent of that reported ten years ago.

Such an increase in numbers is encouraging and most gratifying, but I believe this report will exhibit other indications of progress in the right direction which will be valued still more highly, as criteria of genuine advancement and real success.

SUMMARY OF ENROLLMENT FOR FIVE YEARS.

1885-86.		1888-89.	
Normal department.....	628	Normal department.....	809
Training school:		Training school:	
Primary grades.....	136	Kindergarten.....	31
Grammar grades.....	106	Primary grades.....	94
	242	Grammar grades.....	145
Total, excluding transfers.....	870	Total, excluding transfers.....	1,079
1886-87.		1889-90.	
Normal department.....	675	Normal department.....	811
Training school:		Training school:	
Primary grades.....	135	Kindergarten.....	48
Grammar grades.....	109	Model primary.....	47
	244	Intermediate grades.....	91
Total, excluding transfers.....	919	Grammar grades.....	98
1887-88.		Total, excluding transfers.....	1,095
Normal department.....	714		
Training school:			
Primary grades.....	143		
Grammar grades.....	91		
	234		
Total, excluding transfers.....	948		

NUMBER OF GRADUATES FOR FIVE YEARS.

1886.....	90	1889.....	104
1887.....	99	1890.....	114
1888.....	118	Total for five years.....	525

YEARLY ENROLLMENT IN NORMAL DEPARTMENT FOR TEN YEARS.

1880-81.....	318	1885-86.....	628
1881-82.....	330	1886-87.....	675
1882-83.....	398	1887-88.....	714
1883-84.....	475	1888-89.....	809
1884-85.....	579	1889-90.....	811

IN MEMORIAM.

During the school year 1888-89, an honored teacher, Miss Amelia Hale, was called from her earthly labors. I desire to make here some record of the love and profound respect in which she was held by her co-laborers in the faculty, by the students of this institution and indeed by all who knew her. She was born in Williamston, Michigan, April 20, 1863. She was graduated from the high school in her native village in 1880; she entered the Normal School, as a student, in the autumn of 1882; was graduated with the class of 1885; and in view of her especial proficiency in mathematical

studies and of her great promise as a teacher, received immediate appointment as instructor in the mathematical department. Here she did most acceptable work until the end of the school year, 1888-89, when her failing health compelled retirement from the corps. During the whole of the last year of her service she wrought under weakness and pain that would have conquered a less heroic soul. In the summer of 1889, she went home to die. Her calmness, patience and sweet resignation surpassed description and were above all praise.

She died at her home in Williamston on January 2, 1890.

On February 18, 1890, solemn and impressive services were held in memory of her in the Normal Chapel.

BUILDINGS AND GROUNDS.

The buildings completed and occupied during the last two years are found to be thoroughly convenient and large enough for our present needs and they are, throughout, in excellent repair.

We could, however, make good use of some additions to our grounds. Our present campus is now so much occupied by buildings that we lack sufficient space for play and exercise ground. A large proportion of our students are sons and daughters of farmers, accustomed to abundant outdoor exercise, and there ought to be provided for them plenty of room for that open-air activity which is so conducive to bodily health and mental vigor. The space in the vicinity of the school is being rapidly filled up with residences and boarding houses and I strongly recommend that steps be taken to secure land for the purpose named above, while it can be purchased at a moderate cost. I feel reasonably certain that if the State would contribute from four to five thousand dollars for this purpose the citizens of Ypsilanti would do as much, and the required ground could be secured.

FREE TEXT-BOOKS.

Since the last biennial report the system inaugurated by the board, of loaning text-books to students without cost to them, has been successfully and happily carried out. No students in the State are more worthy of this assistance and none could be more gratefully appreciative of it. Nine out of ten of them earn their own money by the hardest effort and this help is a real and most grateful relief to them.

THE SCHOOL OF TRAINING AND OBSERVATION.

During the last two years the value and efficiency of this department so essential to a normal school have been vastly increased. All recommendations made two years ago have been favorably considered and adopted by your honorable board. We have now the services of two additional teachers, as follows :

1. A model primary teacher who gives model instruction and exemplifies model management and also supervises and criticises the work of pupil teachers while they are temporarily in charge of the model primary room.
2. A kindergartner employed throughout the entire school year. She has charge of the kindergarten, gives instruction in its methods, philosophy, and history, and devotes special attention to the adaptation of kindergarten methods to the needs of the primary grades.

For both of these positions most excellent selections have been made, and the Normal School corps has been strengthened by these additions to it.

The suggestion made in the last report concerning two sessions for the school of training and observation and the allowance of additional time in the senior year of each of the courses of study have been provided for and will go into effect at the beginning of the next school year, September, 1890.

The outlook for this department is most encouraging. If it does not make great advances in usefulness and reputation, it will be our fault who have its administration in charge, since every recommendation looking to its improvement has been allowed and adopted. It is in excellent condition and doing its most important work with great earnestness and power.

COURSES OF STUDY.

The general scheme of courses of study adopted during the last school year and ordered to go into immediate effect, deserves special attention. The three and four years' courses are not materially changed in their contents and amount, but superior flexibility and facility of adaptation to various needs have been secured by offering, in each, a considerable amount of elective work. A brief professional course for college graduates and an advanced six years' course leading to the degree of Bachelor of Pedagogics have also been established. A more detailed account of all the courses is given in the appendix to this report.

Heretofore there have been only two English four-years' courses—the literary and the scientific. Of these, the first was almost exclusively literary and historical, and the second ignored literature and history and was almost purely scientific and mathematical. Therefore, any student desiring a strong English course was compelled to take an unsymmetrical body of work. We gave him a choice between two kinds of mental distortion, but insisted that he should take one or the other. The allowance last year of an elective year added to the three years' English course afforded a grateful, though partial, relief. The adoption of the scheme set forth above thoroughly remedies this unwholesome condition of affairs. It allows each student to employ his time upon such studies as are most advantageous to him, knowing that he will not be defeated of graduation provided he has satisfactorily completed the prescribed amount of work, including all required studies.

THE RELATIONS OF THE NORMAL TO THE HIGH SCHOOLS.

It is impossible for the Normal School to supply more than a very small proportion of the academic instruction required to equip the army of teachers now needed by the public schools of Michigan. This academic preparation belongs in the main to the excellent high schools which are the pride of our system. The Normal School can rightfully be expected to do two things:

1. To provide the best possible academic instruction in all the various branches pertaining to the public schools. This the law requires in plain terms; and it enables the school to instruct academically, those who come from parts of the State where there are no high schools within reach, and also to supplement the high school courses with more advanced study

than they are able to offer. In this way the Normal School is able to equip its graduates with that proper margin of knowledge which ought always to exist between that which an instructor is called upon to teach and the outside limits of his own attainments.

2. To give thorough professional training and instruction to all who are properly prepared, in the subject matters of the branches to be taught, to receive it.

To the high schools rightfully belongs the academic instruction of the teachers required in the State, so far as they are able to give it. It is right that the Normal School supplement their work with more advanced study than they can usually offer, and take care of those whom they cannot reach and, for the rest, confine itself to professional work.

This statement exhibits the close relations that ought to obtain between the Normal School and the high schools. The high schools have an allotted part in the preparation of teachers. They conduct their pupils through certain courses of study. The Normal School performs the same service for those whom the high schools cannot reach; then takes both of these classes of pupils and rounds out and enlarges their academic acquirements; and then gives to both the professional training and instruction that is needed to make teachers of competent scholars.

Your recent action in receiving graduates upon diploma and giving full credit for what the proper high school officer certifies they have completed, seems to me to be a just and reasonable acknowledgment of the proper function of the high school. It is also wise and fair that, in our final certificate given to graduates, the schools which have, in certain branches, certified them to us, should be named, in order that such schools may have both the credit and the responsibility of their work.

It would be well if all high school students would complete their courses and come to us as graduates, but in many instances undergraduates apply for admission with the full consent and approval of their teachers.

ADMISSION WITHOUT EXAMINATION.

Your recent action in granting the admission of high school graduates to the Normal School without examination and in crediting them with the full value of work completed in such high schools, as certified by the proper authorities is, in my judgment, just and reasonable. The Normal School should by no means seek to deplete and weaken its high school allies by any inducements offered to undergraduates, but when such undergraduates do come to us, I believe it would be well and proper to deal with their certified standings exactly as we do with those presented by graduates; our relations with the high schools ought to be very close, friendly, and mutually helpful. We ought to trust them for the satisfactory performance of the work which in the nature of the case belongs to them.

Our sole aim is to advance the interests and enhance the value of the public schools of our great commonwealth, by preparing and sending out into all grades, from the most elementary to the highest, strong, earnest, and well-trained teachers. It is impossible for us to furnish anything like an adequate supply of teachers so equipped, so long as we insist upon doing over again, after the high schools, a large part of their academic work. We should trust them for what they do. Their excellent reputation, extending far beyond the limits of the State, fully justifies us in so

doing. Many of them can equal us in quality of their academic instruction and the sooner we realize this fact the better for the schools of Michigan.

In this connection allow me to express the hope that the day is not far distant when we shall do more than we have yet been able to do to advance the excellence of the rural schools. Graduates of even our shorter courses, readily command places in the graded schools at higher salaries than the district schools can pay. Can we not devise a plan by which we can give at least some professional instruction to teachers who will still remain in these schools? These schools need trained teachers: can we not supply them? Here is the starting point for educational reform. Is it not possible with suitable permissive legislation, to make it an object for young men and women holding third grade certificates to come to the Normal School and take brief professional courses, covering say, six months or a year of time?

I commend this subject to your earnest consideration; it is worthy of careful thought. The changes recently wrought in the policy of the Normal School bring it nearer than ever before to the common schools of the State; and I hope that a way will be found to bring it still closer to them at the point where help is most sorely needed.

THE LIBRARY.

The library every year is becoming better and better suited to meet the needs of the school. During the time here reported upon, large and very valuable additions have been made, amounting to more than two thousand well selected volumes, the present number on the shelves being nearly eleven thousand volumes.

SUMMARY.

During the two prosperous years herein reported upon, the attendance has been much larger than ever before. Extraordinarily large additions having been made to the library; a model primary school and the kindergarten have been opened and successfully operated; the system of free text-books has been adopted and established; the former courses of study have been thoroughly revised, and greatly liberalized by the allowance of elective studies; advanced courses, equal in extent to college courses, have been provided and the degree of bachelor of pedagogics awarded to those who worthily complete them, and a plan of dealing more reasonably and liberally with graduates of high-schools has been adopted and put in practice.

All this is most respectfully submitted,

JOHN M. B. SILL,
Principal.

APPENDIX TO REPORT OF THE PRINCIPAL.

DETAILS OF THE COURSE OF STUDY.

Notes. 1. Four daily studies pursued for forty weeks (one hundred and sixty weeks of work) constitute the regular work for one school year. The satisfactory completion of four hundred and eighty weeks of such work (three years) makes up the amount necessary for the completion of either of the two courses leading to a certificate or license to teach in the public schools of Michigan good for five years; and six hundred and

forty weeks of such work are required for the completion of any of the courses (four years) leading to a diploma and a life certificate.

2. It will be seen that in all the courses certain studies are "required," and certain others are elective, that is to say, chosen by the student with the advice and consent of the principal.

3. The "satisfactory completion" of any study is to be understood as follows:

(a.) A record earned in the study by regular class work, or else by examination, if the study be Arithmetic, Grammar, Geography, Spelling, Reading and Orthoëpy, Civil Government, History of the United States, or the Effects upon the Human System of Stimulants and Narcotics.

(b.) A record earned as above, or by the presentation of approved standing, so far as other studies are concerned.

The following list names all studies offered in the three and four years' courses and shows the number of weeks of study regularly allotted to each. It is called

LIST A,

Of studies offered in the three and four years' courses, showing also the number of weeks which each study regularly occupies.

<i>Art and Manual Training.</i>		Weeks.	<i>Mathematics—Continued.</i>		Weeks
1 Penmanship.....		10	45 Arithmetic. Teachers' Academic Review...		10
2 Drawing.....		20	46 Algebra I.....		20
3 Advanced Drawing.....		20	47 Algebra II.....		20
<i>Civics.</i>			48 Plane Geometry.....		20
4 Civil Government.....		10	49 Solid Geometry.....		20
5 Political Science.....		10	50 Higher Algebra.....		20
<i>English.</i>			51 Trigonometry.....		10
6 Reading and Orthoëpy, Teachers' Academic Review.....		10	52 Surveying.....		10
7 Grammar, Teachers' Academic Review.....		10	<i>Music.</i>		
8 Rhetoric.....		20	53 Vocal Music.....		20
9 English Literature.....		20	54 Advanced Vocal Music.....		20
10 Advanced English Literature.....		10	55 Voice Culture I.....		20
11 American Literature.....		20	56 " " II.....		20
12 Old and Middle English.....		20	57 " " III.....		20
13 Study of Masterpieces.....		20	58 " " IV.....		20
<i>History.</i>			59 Harmony.....		20
14 U. S. History.....		20	60 Advanced Harmony.....		20
15 U. S. History and Civil Government, Teachers' Academic Review.....		10	61 Musical Composition.....		20
16 General History.....		20	62 History and Literature of Music.....		20
17 Grecian and Roman History.....		20	63 Solo Singing I.....		20
18 English Constitutional History.....		20	64 Solo Singing II.....		20
19 United States Constitutional History.....		20	65 Conducting, etc.....		20
<i>Languages, Ancient.</i>			<i>Natural Sciences.</i>		
20 Latin, 1st Term.....		20	66 Physiology and Hygiene.....		20
21 " 2d ".....		20	67 Botany.....		20
22 " 3d ".....		20	68 Zoology.....		10
23 " 4th ".....		20	69 Comparative Zoology.....		20
24 " 5th ".....		20	70 Geology.....		20
25 " 6th ".....		20	71 Geography, Teachers' Academic Review.....		10
26 " 7th ".....		20	<i>Physical Sciences.</i>		
27 " 8th ".....		20	72 Physics.....		20
28 Greek, 1st Term.....		20	73 Advanced Physics.....		20
29 " 2d ".....		20	74 Chemistry.....		20
30 " 3d ".....		20	75 Advanced Chemistry.....		10
31 " 4th ".....		20	76 Astronomy.....		10
<i>Languages, Modern.</i>			77 Instrumental Astronomy.....		10
32 French, 1st Term.....		20	<i>Professional Studies and Exercises.</i>		
33 " 2d ".....		20	78 Psychology.....		20
34 " 3d ".....		20	79 Psychology Applied.....		20
35 " 4th ".....		20	80 Professional Training in Arithmetic.....		5
36 " 5th ".....		20	81 " " Geography.....		5
37 German, 1st Term.....		20	82 " " Grammar.....		5
38 " 2d ".....		20	83 " " Reading.....		5
39 " 3d ".....		20	84 History of Education.....		10
40 " 4th ".....		20	85 Physical Technics.....		10
41 " 5th ".....		20	86 Training in Physical Science.....		10
42 " 6th ".....		20	87 Biological Laboratory Practice.....		10
43 " 7th ".....		20	88 Practice Teaching.....		20
<i>Mathematics.</i>			89 " ".....		10
44 Book-keeping.....		10	90 " ".....		10
			91 " ".....		20
			92 Kindergarten instruction and methods.....		20
			93 Senior Rhetoricals.....		20

NOTE ON LIST A.—Studies 54, 56, 57, 58 and 60-65, inclusive, are excluded from studies to be credited in making up a course, except when the student is pursuing the Music Course. Studies 86 and 87 are interchangeable in all courses. Work in any ancient or modern language is not credited in making up the amount due in any course until a record in such language covering at least three terms, has been earned.

The following studies from list A are required in all the courses, except as noted. The numbers refer to corresponding numbers in list A:

1, Penmanship; 2, Drawing, except in Music Course; 4, Civil Government; 6, Reading and Orthoepey; 7, Grammar; 8, Rhetoric; 14, U. S. History; 15, Review of History and Civil Government; 16, General History, except in the Ancient Classical and the Modern Classical Course; 45, Arithmetic; 46, 47 and 48, Algebra I and II, and Plane Geometry, except in the Music Course; 66, Physiology, Hygiene etc.; 71, Geography; 72, Physics; 78, Psychology; 79, Psychology applied, except in the course for a five years' certificate, the Modern Classical and the Music course; 80, 81, 82 and 83, Professional Instruction in Common Branches; 84, History of Education, except in the courses named above, after 79; 86, Training in Physical Science, except in the Music Course; 88 and 89, Practice Teaching; 90 and 91, Practice Teaching, except in Ancient Classical, and the Modern Classical Course.

The three years' courses leading to a certificate (or license to teach) good for five years, are named and constituted as follows:

1. *Course for a five years' certificate*—Required studies as shown above and 120 weeks of elective studies from list A.

2. *Kindergarten Course*—Required studies as shown above; Vocal Music (53), Zoology (68), Solid Geometry (49), Kindergarten Instruction and Methods (92), and 70 weeks of elective studies from list A.

The four years' courses, leading to a diploma and life certificate, are named and constituted as follows:

1. *Literary and Scientific Course*—Required studies as shown above and 250 weeks of elective studies from list A.

2. *The Literary Course*—Required studies as shown above; English Literature (9), Political Science (5), Grecian and Roman History (17), Advanced English Literature (10), American Literature (11), Old and Middle English (12), Study of Masterpieces (13), English Constitutional History (18), American Constitutional History (19), and 100 weeks of studies elected from list A.

3. *The Scientific Course*—Required studies as shown above; Advanced Drawing (3), Zoology (68), Comparative Zoology (69), Botany (67), Chemistry (74), Advanced Physics (73), Geology (70), Physical Technics (85), Astronomy (76), Solid Geometry (49), Higher Algebra (50), Trigonometry (51), and 50 weeks of elective studies from list A.

4. *The Ancient Classical Course*—Required studies as shown above; Latin (20-27), Greek (28-31), Grecian and Roman History (17), and 40 weeks of elective studies from list A.

5. *The Modern Classical Course*—Required studies as shown above; German and French (32-43), and 40 weeks of elected studies from list A.

6. *The English Latin Course*—Required studies as shown above; Latin (20-27), Grecian and Roman History (17) and 90 weeks of studies elected from list A.

7. *The English German Course*—Required studies as shown above; German (37-43), and 110 weeks of studies elected from list A.

8. *English French Course*—Required studies as shown above; French (32-36), and 150 weeks of studies elected from list A.

9. *The Music Course*—Required studies as shown above; Music studies (53-65), and 130 weeks of studies elected from list A.

NOTES ON THE FOREGOING COURSES—1. In the choice of elective studies, regard must be had to the schedule of daily exercises. That is, the choice of such studies may be limited, in certain instances, by the possibilities of the schedule. It will sometimes happen that a desired elective study cannot be taken on account of conflict with another elective, or with some required study.

2. The choice of elective studies must also be made with due regard to suitable and necessary sequences. No study may be selected until the student is prepared for it by adequate knowledge of whatever necessarily precedes it. Professional training in any one of the common branches is to be preceded by a record earned in such branch, and also by 10 weeks in Psychology.

In the synopsis of the courses given above, studies, No. 5, 9-13, 18 and 19, aggregating 140 weeks, are noted as required studies in the *Literary Course*, and studies No. 3, 49-51, 67-70, 73-76 and 85, aggregating 200 weeks, are noted as required studies in the *Scientific course*, but in either of these courses 20 weeks of elective studies will be accepted in place of 20 weeks of the studies named in this paragraph as required studies.

ADVANCED COURSES.

The following advanced courses lead to a life certificate and to a diploma carrying with it the honors of the degree of Bachelor of Pedagogics:

1. The recently established

PROFESSIONAL COURSE FOR GRADUATES OF COLLEGES.

1	Mental Science applied to teaching.....	20
2	Professional training in common branches.....	20
3	History of education.....	10
4	Practice teaching and supervision.....	20
5	Lectures on principles and methods.....	10

NOTE—The requirements for admission to this course are as follows: (1) The presentation of a diploma showing that the applicant holds the degree of A. B., B. S., B. L., or B. Ph. from the University of Michigan or from an incorporated college in Michigan. (2) The applicant must also pass a satisfactory examination in the academic phases of the common branches, as follows: Orthoëpy and spelling, geography, grammar, arithmetic, history of United States, civil government, and that part of physiology and Hygiene that has special reference to the effects of alcoholic drinks, stimulants and narcotics upon the human system.

The requirement for graduation is the satisfactory completion of the foregoing course after a residence of at least 20 weeks at the Normal School.

This course leads to the degree of Bachelor of Pedagogics, and to a life license to teach.

2. Advanced courses now for the first time offered. These cover 960 weeks of work selected from list A (see page 13), and from list B.

LIST B.

Additional Studies Offered to Students in Advanced Courses. (See above.)

	Weeks.
94 Advanced Psychology.....	10
95 Discussions and comparisons of educational systems and theories.....	10
96 Advanced practice teaching and supervision.....	20
97 Entomology.....	20
98 Sanitary science (lectures).....	10
99 Meteorology.....	10
100 General geometry, or calculus.....	20
101 Advanced rhetoric.....	20
102 Latin, 9th term.....	20
103 " 10th ".....	20
104 " 11th ".....	20
105 " 12th ".....	20
106 Greek, 5th term.....	20
107 " 6th ".....	20
108 " 7th ".....	20
109 " 8th ".....	20
110 Studies in German and French literature.....	20

The specifications for the completion of these advanced courses are as follows:

1. For those who have completed either of the three years' courses, 480 weeks of additional work selected from the studies named in lists A and B.

2. For those who have completed any one of the four years' courses, 320 weeks of additional work, selected as shown under 1 above.

3. Provided in all cases that among the studies so selected shall be numbers 79 and 84 of list A, and numbers 94, 95, 96, and 98 of list B, unless a record has already been earned in them.

The degree of Master of Pedagogics is obtainable upon the following conditions:

Any person holding the degree of Bachelor of Pedagogics of the Michigan State Normal School may, upon application, receive the degree of Master of Pedagogics upon the following conditions:

1. He shall furnish evidence satisfactory to the State Board of Education that he has been engaged in teaching or in school supervision continuously and with pronounced success for five years since receiving the Bachelor's degree.

2. He shall prepare and present a thesis acceptable to the said Board of Education, upon some subject connected with the History, Science, or Art of Education: the Board reserving the right to assign the subject of such thesis.

TREASURER'S REPORT.

State Board of Education:

GENTLEMEN—I have the honor to hand you herewith my report as Treasurer of your board for the fiscal years ending respectively June 30, 1889, and June 30, 1890.

Exhibits A and B are statements of all amounts received by me and the sources from which the different amounts were derived during these years.

Exhibits C and D are statements in detail of every expenditure made during the two years for all purposes. The voucher numbers given refer to duplicate vouchers, one set of which is on file in the office of the Auditor General, the other in my office. The set in my office is of course the property of the Board, subject at all times to its inspection and control.

Exhibits E and F are detailed statements of salary account for the two years.

Exhibits G and H are tabular statements of the account of the State of Michigan with me during these years, and are made from the quarterly audits of my accounts by the Auditor General.

The several balances reported are deposited in the bank approved by you.

Very respectfully yours,
S. S. BABCOCK,
Treasurer.

EXHIBIT A.—CONTINUED.

II.—On Account of Building and Special Purposes.

Date.	Of Whom Received.	Amount.	
I.—Building Additions.			
1888.			
July 1.....	Balance on hand.....	\$7,681 13	
Sept. 4.....	Part State Treasurer's check No. 31,443.....	5,825 00	\$13,506 13
II.—Heating Apparatus.			
July 1.....	Balance on hand.....		8,025 00
III.—Seating and Furnishing.			
Aug. 1.....	Part of State Treasurer's check No. 31,064.....	\$4,175 00	
Dec. 31.....	Transferred from heating apparatus.....	\$10 45	
Dec. 31.....	" " building additions.....	21 02	4,506 47
IV.—Library.			
July 1.....	Balance on hand.....	\$323 25	
Sept. 29.....	Transfers from current expense.....	500 00	
1889.			
June 29.....	" " " ".....	1,500 00	2,823 25
Total debits (building and special purposes).....			\$23,860 85
Deduct transfers.....			2,331 47
Total less transfers (building and special purposes).....			\$21,529 38
Current expense.....		\$50,630 54	
Building and special purposes.....		21,529 38	
Total debits for all purposes.....			\$72,159 92

EXHIBIT B.

S. S. BABCOCK, TREASURER.—DR.

FOR FISCAL YEAR ENDING JUNE 30, 1890.

I.—On Account of Current Expenses.

Date.	Of Whom Received.	Amount.	
I.—Legislative Appropriation.			
1889.			
July 15.....	Part of State Treasurer's check No. 36,467.....	\$3,967 00	
Oct. 8.....	" " " " 37,618.....	13,563 50	
1890.			
Jan. 30.....	" " " " 39,347.....	10,462 50	
May 2.....	" " " " 40,735.....	10,462 50	
June 30.....	" " " " 41,556.....	10,462 50	\$53,918 00
II.—Normal School Interest Fund.			
1889.			
July 15.....	Part of State Treasurer's check No. 36,467.....	\$1,033 00	
Oct. 8.....	" " " " 37,618.....	1,030 69	
1890.			
Jan. 30.....	" " " " 39,347.....	953 00	
May 2.....	" " " " 40,735.....	1,179 50	
June 30.....	" " " " 41,556.....	1,050 00	\$5,260 19
III.—Admission Fees.			
1889.			
Sept. 30.....	Frances L. Stewart, clerk.....	\$2,000 00	
Dec. 13.....	" " " ".....	164 00	
Dec. 31.....	" " " ".....	101 00	
1890.			
Feb. 15.....	" " " ".....	2,095 00	

PUBLIC INSTRUCTION.

EXHIBIT B.—CONTINUED.

Date.	Of Whom Received.	Amount.	
1889. April 3..... June 30.....	Frances L. Stewart, clerk..... ".....	\$227 50 124 50	\$4,712 00
IV.—Laboratory Fees.			
1889. Dec. 13..... Dec. 31.....	Frances L. Stewart, clerk..... ".....	\$56 00 4 00	
1890. Feb. 15..... April 8..... May 8..... June 30.....	" "..... " "..... " "..... " ".....	120 00 25 00 11 50 1 50	218 00
V.—Diploma Fees.			
1889. Dec. 31.....	Frances L. Stewart, clerk.....	\$9 00	
1890. Feb. 15..... April 3..... June 30.....	" "..... " "..... " ".....	6 00 2 00 800 00	818 00
VI.—Interest on Balances.			
1889. Dec. 2.....	Wayne County Savings Bank..... " ".....	\$101 00 82 81	183 81
VII.—Pianos and Organ.			
1889. Feb. 15..... April 3..... June 30.....	Frances L. Stewart, clerk..... " "..... " ".....	\$9 00 5 40 13 00	26 40
Total debits (current expenses).....			\$64,636 40

II.—On Account of Building and Special Purposes.

Date.	Of Whom Received.	Amount.	
I.—Building Additions.			
1889. July 1.....	Balance on hand.....		\$2 14
II.—Library.			
1889. July 1.....	Balance on hand.....	\$1,476 89	
1890. March 31.....	Transferred from current expense.....	1,500 00	2,976 89
Total.....			\$2,979 03
Deduct transfers.....			1,500 00
Total, less transfers (building and special purposes).....			\$1,479 03
Current expenses.....		\$64,636 40	
Building and special purposes.....		1,479 03	
Total for all purposes.....			\$66,115 43

RECAPITULATION.—DR.

Current expense for 1888-1889.....	\$50,630 54	
" " 1889-1890.....	64,636 40	\$115,266 94
Building additions, etc., for 1888-1889.....	\$21,529 38	
" " 1889-1890.....	1,479 08	23,008 41
Total for all purposes for two years.....		\$138,275 35

EXHIBIT C.

S. S. BABCOCK, TREASURER.—CR.

FOR FISCAL YEAR ENDING JUNE 30, 1889.

I.—Current Expense.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.
1888.				
July 12	256	By Detroit Evening Journal	Advert'g bids for fuel	\$7 58
12	257	Evening News Association		11 78
12	258	P. R. Cleary	Engrossing diplomas	25 00
Aug. 1	259	C. A. Strellinger & Co.	Museum	58
1	260	Mich. Bell Telephone Co.	Rent of telephone	12 00
1	261	Ypsilanti postoffice	Postage	25 00
1	262	Ypsilanti Gas Co.	Lights	26 80
1	263	John Bibb	Extra labor	10 50
1	264	Pay roll for July	Salaries	220 00
24	265	Homer Briggs	Freight and express	14 53
24	266	Tel. & Telephone Const. Co.	Use of state line	1 05
24	267	W. H. Sweet	Ribbons for diplomas	21 75
24	268	Ypsilanti postoffice	Postage	10 00
24	269	August Muller	Repairing pianos	75 00
24	270	T. S. & J. D. Negus	Apparatus	80 65
31	271	Pay roll for August	Salaries	220 50
Sept. 30	272	The Richmond & Backus Co.	Supplies	10 50
30	274	F. K. Rexford & Sons	Fuel	2,554 37
20	275	"	Repairs	2 50
20	276	J. M. B. Sill	Contingent	13 70
20	277	"	Extra labor	87 12
30	278	Austin George	Repairs	10 00
30	279	Henry J. Green	Apparatus	50 60
29	280	Pay roll for September	Salaries	3,557 00
Oct. 13	281	Detroit Electrical Works	Apparatus	40 55
13	282	Coe Bros.	Printing	23 60
13	283	Smith & Osband	"	49 20
30	284	Pay roll for October	Salaries	3,557 00
Nov. 1	285	James W. Queen & Co.	Apparatus	52 15
1	286	Educational Supply Co.	"	15 09
30	287	Mich. Bell Telephone Co.	Rent of telephone	12 00
30	288	Pay roll for November	Salaries	3,557 00
30	289	Mich. Bell Telephone Co.	Use of state line	8 00
30	290	Ypsilanti Gas Co.	Lights	45 80
30	291	"	"	22 80
30	292	Royce & Co.	Museum	4 00
Dec. 14	293	Moore & Stewart	Supplies	5 04
14	294	Ypsilanti postoffice	Postage	10 00
14	295	C. W. Rogers	Supplies	2 90
14	296	Coe Bros.	"	11 50
14	297	Smith & Osband	"	13 00
14	298	Peninsular Paper Co.	"	16 40
14	299	J. M. B. Sill	Extra labor	11 00
14	300	C. M. Martin	Repairs	8 43
14	301	Nina C. Vandewalker	Supplies	26 62
14	302	Ypsilanti Gas Co.	Lights	45 00
14	303	J. M. B. Sill	Freight and express	15 62
14	304	Frank Smith	Supplies	64 53
14	305	James M. Southwick	Museum	4 45
14	306	James W. Queen & Co.	Apparatus	19 31
14	307	Homer Briggs	Freight and express	25 66
31	308	Pay roll for December	Salaries	3,557 00
31	309	Coe Bros.	Contingent	93 15
31	310	W. C. Stevens	Supplies	47 61
31	311	The Richmond & Backus Co.	"	15 08
31	312	Walter Hewitt	Tuning piano & organ	6 00
31	312½	F. P. Bogardus	Insurance	636 00
31	313	C. King & Son	Contingent	2 90
31	314	Mich. Bell Telephone Co.	Use of state line	1 75
31	315	Tel. & Telephone Const. Co.	Rent of telephone	12 00
Carried forward				\$19,086 71

EXHIBIT C.—CONTINUED.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.	
		Brought forward.....		\$19,086 71	
1888.					
Dec.	316	Chas. M. Martin.....	Supplies.....	62 43	
	317	Frank Smith.....	".....	19 20	
	318	Peninsular Paper Co.....	".....	4 32	
	319	Ypsilanti postoffice.....	Postage.....	10 00	
	320	Ypsilanti Gas Co.....	Lights.....	45 40	
	321	Thos. Charles.....	Museum.....	17 22	
	322	Ward & Howell.....	".....	75 15	
	323	C. Dorlinger & Son.....	".....	11 38	
	324	H. T. Phillips & Co.....	".....	28 46	
	325	Wm. Reid.....	Supplies.....	1 00	
	326	M. S. Leach.....	Museum.....	9 00	
	327	C. F. Enders.....	".....	68 00	
	328	S. S. Babcock.....	Contingent.....	200 00	
	329	J. M. B. Sill.....	".....	20 88	
	330	J. Everett Smith.....	Fuel.....	100 00	
	331	Smith & Osband.....	Printing.....	220 00	
	332	S. S. Babcock.....	".....	34 10	
	333	Detroit News Co.....	Supplies.....	2,797 07	
	334	F. J. Schwankovsky.....	Piano.....	600 00	
1889.					\$23,410 28
Jan.	335	Henry A. Ward.....	Museum.....	\$47 05	
	336	Western Union Telegraph Co.....	Contingent.....	6 72	
	337	B. Westerman & Co.....	Apparatus.....	23 19	
	338	Smith & Osband.....	Supplies.....	3 75	
	339	Pay roll for January.....	Salaries.....	3,577 00	
	340	W. A. Olmstead.....	Kindergarten supplies.....	96 34	
	341	Whitall, Tatum & Co.....	Museum.....	9 81	
Feb.	28	Pay roll for February.....	Salaries.....	3,597 00	
Mar.	23	C. H. Decker.....	Apparatus.....	3 50	
	24	Union School Furniture Co.....	Furniture.....	30 00	
	25	M. S. Smith & Co.....	".....	34 00	
	26	C. F. Enders.....	".....	10 00	
	27	Frank A. Norton.....	Museum.....	7 50	
	28	E. T. Curtiss.....	Kindergarten supplies.....	12 96	
	29	O. E. Thompson & Sons.....	Repairs.....	14 86	
	30	Lansing Iron & Engine Works.....	".....	2 46	
	31	Coe Bros.....	Supplies.....	18 20	
	32	Samuel Hand.....	Repairs.....	8 50	
	33	John Bibb.....	Extra labor.....	8 00	
	34	The Peninsular Paper Co.....	Supplies.....	6 88	
	35	Ypsilanti Gas Co.....	Lights.....	44 00	
	36	March pay roll.....	Salaries.....	3,597 00	
	37	John E. Mathews.....	Supplies.....	2 75	
	38	J. M. B. Sill.....	Apparatus.....	1 00	
	39	Walter Hewitt.....	Pianos and organs.....	8 00	
	40	Eberbach & Sons.....	Apparatus.....	5 73	
	41	".....	".....	6 30	
	42	J. M. B. Sill.....	Museum.....	2 23	
	43	".....	Supplies.....	6 15	
	44	".....	Contingent.....	6 34	
	45	Ypsilanti postoffice.....	Postage.....	5 00	
	46	J. M. B. Sill.....	Freight and express.....	3 90	
	47	".....	Extra labor.....	1 78	
	48	Ypsilanti Gas Co.....	Lights.....	31 20	
	49	Smith & Osband.....	Printing.....	7 39	
	50	A. W. Kenny.....	Repairs.....	8 45	
	51	Pay roll for April.....	Salaries.....	3,677 00	
Apr.	1	F. K. Rexford & Sons.....	Fuel.....	845 18	
May	1	D. Edwards.....	Repairs.....	11 35	
	2	Calvert Lith. & Engraving Co.....	Diplomas.....	5 40	
	3	Ypsilanti postoffice.....	Postage.....	20 00	
	4	Peninsular Paper Co.....	Supplies.....	9 76	
	5	Tel. & Telephone Const. Co.....	Rent of telephone.....	12 00	
		Carried forward.....		\$38,787 36	

EXHIBIT C.—CONTINUED.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.	
		Brought forward.....		\$38,787 36	
1889.					
May 1....	378	Drury & Taylor.....	Supplies.....	1 27	
1....	379	E. Samson.....	".....	8 86	
1....	380	Mich. Bell Telephone Co.....	Use of state line.....	1 05	
1....	381	Coe Bros.....	Printing.....	17 00	
1....	382	The Detroit News Co.....	Supplies.....	195 70	
1....	383	W. A. Olmstead.....	Furniture.....	16 00	
1....	384	C. F. Enders.....	Kindergarten supplies.....	53 25	
1....	385	James W. Queen & Co.....	Apparatus.....	42 40	
1....	386	Educational Supply Co.....	".....	46 71	
1....	387	S. S. Babcock.....	Loan paid.....	143 72	
1....	388	Ypsilanti Gas Co.....	Lights.....	53 80	
1....	389	J. M. B. Sill.....	Freight and express.....	60	
1....	390	Chicago Kindergarten Supply Co.....	Kindergarten supplies.....	20 28	
1....	391	J. M. B. Sill.....	Supplies & extra labor.....	4 50	
1....	392	".....	Chemicals.....	1 00	
1....	393	O. E. Thompson.....	Fuel.....	150 39	
1....	394	".....	Repairs.....	70 70	
1....	395	Frances L. Stewart.....	Salary.....	15 00	
31....	396	W. P. Bowen.....	".....	30 00	
31....	397	C. D. McLouth.....	".....	120 00	
31....	398	Amelia Hale.....	".....	30 00	
31....	399	H. W. Miller.....	".....	160 00	
31....	400	May pay roll.....	".....	3,782 00	
June 28....	401	June pay roll.....	".....	3,782 00	
28....	402	S. S. Babcock.....	Contingent.....	200 00	
28....	403	J. M. B. Sill.....	Repairs.....	170 53	
28....	404	Calvert Lith. and Eng. Co.....	Diplomas.....	90 75	
28....	405	Wm. H. Brooks.....	Engrossing diplomas.....	25 00	
28....	406	Smith & Osband.....	Printing.....	328 55	
28....	407	J. M. B. Sill.....	Repairs.....	12 55	
28....	408	Smith & Osband.....	Supplies.....	8 00	
28....	409	Ypsilanti Gas Co.....	Lights.....	25 80	
28....	410	J. M. B. Sill.....	Freight and express.....	75	
28....	411	Henry T. Coe.....	Printing.....	28 50	
28....	412	Frank Smith.....	Supplies.....	34 31	
28....	413	C. King & Son.....	".....	1 80	
28....	414	The Richmond & Backus Co.....	".....	6 50	
28....	415	Normal News.....	Contingent.....	10 00	
28....	416	Frank Potter.....	Pianos and organs.....	15 00	
28....	417	Normal News.....	Printing & advertising.....	25 00	
28....	418	Ypsilanti postoffice.....	Postage.....	22 25	
28....	419	C. King & Son.....	Repairs.....	57 50	
28....	420	George Van Grierson.....	Supplies.....	6 00	
28....	421	Peninsular Paper Co.....	".....	14 16	
28....	422	Albert A. Stanley.....	Contingent.....	10 00	
1888.					\$48,680 54
Sept. 29....		Transferred to library fund.....		\$500 00	
1889.					
June 29....		" " ".....		1,500 00	2,000 00
Total credits to current expense for fiscal year.....					\$50,680 54

EXHIBIT C.—CONTINUED.

II.—Building and Special Purposes.

Date.	No. of voucher.	Payee.	Amount.	
1.—Building Additions.				
1888.				
July 7	78	D. Edwards	\$52 00	
Aug. 1	80	Hess & Roseman	150 00	
11	81	D. Edwards	52 00	
22	83	Dean Bros.	5,500 00	
24	85	J. L. Harlow	315 00	
24	86	Edwin T. Borison	2 00	
31	89	D. Edwards	54 00	
Sept. 4	90	Dean Bros.	1,200 00	
5	91		3,000 00	
19	96	Brand & McCollough	668 78	
20	99	A. H. Pierson	7 00	
20	100	George Bartlett	12 25	
20	101	John Bibb	14 83	
20	102	Michael O'Brien	14 25	
20	103	Arthur Jones	37 50	
20	104	Hess & Roseman	175 00	
20	105	George Saney	24 40	
Oct. 1	109	J. L. Harlow	10 09	
1	110	U. Armstrong & Son	400 32	
18	112	D. Edwards	54 00	
13	113	O. E. Thompson	5 59	
13	114	Drury & Taylor	13 67	
13	115	Arthur Jones	9 00	
19	119	Dean Bros.	856 75	
Nov. 1	126	Globe Furniture Co.	230 60	
30	130	James Coquillard	22 85	
30	131	A. W. Kenny	12 78	
30	139	Smith & Osband	150 00	
Dec. 14	143	Fulmore & Scoville	110 47	
14	146	H. W. Worden	96 80	
31	153	S. W. Pearson & Co.	10 06	
31	153	J. M. B. Sill	46 46	
31	141	Thomas L. McKee	127 50	
31	165	McElcherson & McAndrews	24 00	
31	166	Lornback & Hubler	10 00	
31	167	C. F. Enders	15 00	
		Total credits, building additions	\$13,482 97	
31		Transferred to seating and furnishing fund	21 02	
		Balance on hand	2 14	\$13,506 13
2.—Heating Apparatus.				
July 12	79	Detroit Metal & Heating Works	\$1,000 00	
Aug. 16	82	Nutt & Clark	25 00	
Sept. 5	92	Detroit Metal & Heating Works	300 00	
26	107	" "	510 00	
13	116	Peter Dresser	9 68	
Oct. 19	120	James W. Partlan	272 89	
Nov. 1	125	MacDonald Bros. & Co.	95 09	
30	132	Ypsilanti Gas Co.	42 79	
30	133	" "	65 15	
30	135	Adelphic Society	25 00	
30	136	Olympic "	25 00	
30	137	Athenium "	25 00	
30	138	Crescent "	25 00	
Dec. 14	145	W. G. Martin	11 75	
31	149	Ypsilanti Gas Co.	16 66	
31	155	W. G. Martin	45 50	
31	156	J. W. Partlan	27 17	
		Carried forward	\$2,521 60	

STATE BOARD OF EDUCATION.

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EXHIBIT C.—CONTINUED.

Date.	No. of voucher.	Payee.	Amount.	
		Brought forward.....	\$2,521 60	
1888.				
Dec. 31.....	157	Ypsilanti Machine Works.....	29 26	
31.....	161	A. Harvey & Sons.....	91 11	
31.....	162	Ypsilanti Gas Co.....	72 50	
		Total for heating apparatus.....	\$2,714 47	
		Transferred to seating and furnishing.....	310 45	\$3,025 00
		3.—Seating and Furnishing.		
Aug. 24.....	87	U. Armstrong & Son.....	\$650 00	
31.....	88	Dudley & Fowle.....	279 00	
Sept. 12.....	98	U. Armstrong & Son.....	200 00	
19.....	95	MacDonald Bros. & Co.....	536 00	
20.....	96½	The Globe Furniture Co.....	1,063 75	
20.....	98	C. F. Enders.....	168 75	
30.....	106	C. D. Stuart.....	118 10	
Oct. 12.....	111	James Metcalf.....	71 17	
12.....	117	The Globe Furniture Co.....	471 10	
13.....	118	C. F. Enders.....	42 80	
19.....	121	Zabriskie & Bennett.....	6 80	
24.....	122	Dudley & Fowle.....	53 00	
24.....	123	James Metcalf.....	135 00	
Nov. 30.....	134	The Globe Furniture Co.....	177 60	
Dec. 14.....	140	Charles A. Strellinger.....	28 40	
14.....	142	C. F. Enders.....	21 00	
14.....	147	J. M. B. Sill.....	6 75	
31.....	148	F. K. Rexford & Sons.....	299 68	
31.....	154	C. F. Enders.....	100 00	
31.....	159	Thos. Charles.....	6 52	
31.....	160	MacDonald Bros. & Co.....	73 10	4,506 47
		4.—Library.		
Aug. 22.....	84	Houghton, Mifflin & Co.....	\$6 50	
Sept. 12.....	94	The Microscope Publishing Co.....	75	
20.....	97	Cassius M. Upton.....	48 00	
29.....	108	John L. Atwater.....	6 00	
Oct. 23.....	124	John MacFarlane.....	167 53	
Nov. 12.....	127	Publishers' Weekly.....	7 00	
12.....	128	N. D. C. Hodges, publisher.....	3 50	
19.....	129	John MacFarlane.....	299 54	
Dec. 14.....	144	".....	104 17	
31.....	150	D. Appleton & Co.....	12 00	
31.....	151	John MacFarlane.....	291 52	
31.....	168	".....	71 90	
31.....	164	".....	304 50	
1889.				
May 12.....	168	Houghton, Mifflin & Co.....	6 50	
June 18.....	169	C. H. Pursell.....	5 00	
28.....	170	John L. Atwater.....	6 00	
28.....	171	J. M. B. Sill.....	6 00	
		Total credits to library.....	\$1,346 36	
		Balance to new account.....	1,476 89	2,823 25
		Total credits (B. and Spl. P.) including bal. and trans.....	\$23,860 85	
		Deduct transfers.....	2,331 47	
		Totals less transfers (building and special purposes).....	\$21,529 38	
		Current expense.....	\$50,630 54	
		Building and special purposes.....	21,529 38	
		Total credits for all purposes.....	\$72,159 92	

EXHIBIT D.

S. S. BABCOCK, TREASURER.—CR.

FOR FISCAL YEAR ENDING JUNE 30, 1890.

1.—Current Expense.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.
1889.				
July 1		By balance overdrawn at end of year.		\$1,500 56
Aug. 1	423	Pay roll for July.	Salaries	285 00
1	424	F. P. Bogardus, agent.	Insurance	186 00
1	425	Julia E. Sherman, agent.	"	180 00
1	426	P. W. Carpenter & Son, agent.	"	126 00
1	427	Frank Joelyn, agent.	"	126 00
1	428	D. B. Green, agent.	"	186 00
1	429	C. F. Taylor, agent.	"	36 00
1	430	Ypsilanti Gas Co.	Lights	24 60
1	431	Walter Hewitt.	Piano and Organ	10 00
1	432	Ypsilanti postoffice	Postage	25 00
1	433	W. H. Sweet.	Diplomas	4 25
1	434	Ypsilanti Ladies' Library Associ'n.	Contingent	200 00
1	435	Quirk & King.	Repairs	10 20
1	436	H. R. Pattengill, pub.	Advertising	25 00
1	437	J. M. B. Sill.	Repairs	53 85
1	438	Smith & Osband	Printing	12 00
1	439	Clayton, Lambert & Co.	Apparatus	8 25
1	440	T. C. Grawn	Board of visitors	27 20
1	440½	Library Bureau	Supplies	21 00
1	441	The Richmond & Backus Co.	"	5 00
1	442	Ostler Printing Co.	"	115 00
31	443	Charles M. Martin	"	41 64
31	444	Mich. Bell Telephone Co.	Use of line	1 35
31	445	Tel. and Telephone Construction Co.	Rent of phone	12 00
31	446	James Coquillard.	Repairs	11 50
31	447	John Bibb	Extra labor	8 00
31	448	John E. Matthews	Supplies	2 75
31	449	F. K. Rexford & Sons	Fuel	2,490 65
31	450	" " "	Supplies	24 75
31	451	Moore & Stewart.	"	2 95
31	452	F. P. Bogardus, agent.	Insurance	106 00
31	453	O. Hennecke	Apparatus	35 85
31	454	Peninsular Paper Co.	Supplies	8 00
31	455	Globe Furniture Co.	Furniture	96 40
31	456	M. A. Fairbank.	Board of visitors	9 85
31	457	Pay roll for August.	Salaries	265 00
Sept. 30	458	The Detroit News Co.	Supplies	399 70
30	459	Pay roll for September	Salaries	3,862 00
30	460	C. F. Enders	Furniture	91 67
30	461	James Nall & Co.	Supplies	64 13
30	462	The Detroit News Co.	"	55 02
30	463	E. A. Strong.	Repairs	96 97
30	464	O. E. Thompson & Sons	"	263 00
30	465	F. H. Barnum.	Museum	2 50
30	466	Howling & Shafer.	Apparatus	1 20
30	467	Smith & Osband	Printing	20 05
30	468	J. E. Basset	Extra labor	2 50
30	469	Ypsilanti postoffice	Postage	15 25
30	470	Ypsilanti Paper Box Co.	Museum	1 85
30	471	James Hobson	"	75 75
30	472	O. E. Thompson & Sons.	Repairs	18 43
Oct. 5	473	J. M. B. Sill.	Contingent	3 78
			Extra labor	6 50
			Museum	1 50
			Repairs	1 05
		Carried forward		\$11,248 45

EXHIBIT D.—CONTINUED.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.	
1899.		Brought forward.....		\$11,248 45	
Oct. 5	474	By J. M. B. Sill.....	Freight and Express.....	6 85	
5	475	J. L. Harlow.....	Repairs.....	4 50	
5	476	James M. Southwick.....	Museum.....	22 36	
5	477	Geo. H. Barton.....	".....	27 68	
5	478	C. F. Enders.....	Apparatus.....	25 00	
5	479	Theodore Nelson.....	Board of visitors.....	12 50	
5	480	W. A. Olmstead.....	Kindergarten supplies.....	17 60	
5	481	Whital, Tatum & Co.....	Apparatus.....	22 37	
5	482	Bausch & Lomb Optical Co.....	".....	6 68	
17	483	L. J. McSweeney.....	Contingent.....	1 50	
22	484	Tribune Printing Co.....	".....	18 00	
31	485	Lillian Crawford.....	Salaries.....	10 00	
31	486	W. P. Bowen.....	".....	10 00	
31	487	Pay roll for October.....	".....	3,882 00	
Nov. 7	488	The Detroit News Co.....	Supplies.....	92 14	
9	489	A. S. Barnes & Co.....	Training school sup's.....	20 00	
30	490	Pay roll for November.....	Salaries.....	3,882 00	
Dec. 3	491	Frank Smith.....	Repairs.....	20 13	
3	492	Ypsilanti postoffice.....	Supplies.....	29 00	
3	493	Ypsilanti Gas Co.....	Postage.....	8 00	
3	494	".....	Lights.....	28 80	
3	495	".....	".....	34 00	
3	496	Peninsular Paper Co.....	Supplies.....	6 80	
3	497	Moore & Stewart.....	".....	8 53	
3	498	Tel. & Telephone Construction Co.....	Rent of phone.....	12 00	
3	499	Mich. Bell Telephone Co.....	Use of line.....	75	
3	500	R. Damon.....	Repairs.....	7 13	
3	501	O. E. Thompson & Sons.....	".....	10 79	
3	502	A. W. Kinney.....	".....	46 36	
3	503	Frank Smith.....	Training school sup's.....	26 70	
3	504	Robbins & Edwards.....	Repairs.....	23 87	
3	505	F. K. Rexford & Sons.....	Furniture.....	33 63	
3	506	C. D. Stuart.....	".....	11 00	
3	507	Bausch & Lomb Optical Co.....	Apparatus.....	8 81	
3	508	A. E. Foote.....	".....	7 80	
3	509	Henry T. Coe.....	Printing.....	14 60	
3	510	Peninsular Paper Co.....	Training school sup's.....	14 98	
3	511	Cadillac News and Express.....	".....	22 50	
3	512	Lucy A. Osband.....	Museum.....	2 72	
3	513	James M. Southwick.....	".....	15 27	
3	514	R. N. Reynolds, M. D.....	Apparatus.....	6 40	
3	515	Chas. M. Norton.....	Repairs.....	5 87	
3	516	D. Appleton & Co.....	Training school sup's.....	18 50	
3	517	Ypsilanti Machine Works.....	Repairs.....	38 17	
3	518	MacDonald Bros. & Co.....	Furniture.....	77 75	
3	519	J. M. B. Sill.....	Extra labor.....	40 90	
3	520	Chicago Kindergarten Supply Co.....	Kindergarten supplies.....	48 45	
3	521	W. A. Olmstead.....	Training school sup's.....	11 40	
3	522	MacDonald Bros. & Co.....	Repairs.....	4 00	
3	523	J. M. B. Sill.....	Freight and express.....	7 55	
3	524	J. M. B. Sill.....	Contingent.....	6 30	
3	525	B. Westerman & Co.....	Apparatus.....	21 53	
3	526	The Richmond & Backus Co.....	Supplies.....	8 60	
3	527	Henry T. Coe.....	Repairs.....	48 35	
3	528	Eberbach & Son.....	Museum.....	3 65	
13	529	Farrand & Williams.....	Supplies.....	10 66	
31	530	Pay roll for December.....	Salaries.....	3,882 00	
31	531	Detroit Dry Dock Co.....	Contingent.....	32 50	
31	532	H. D. Edwards & Co.....	".....	2 54	
31	533	W. J. Button, agent.....	Supplies.....	112 50	
		Carried forward.....		\$24,185 97	

PUBLIC INSTRUCTION.

EXHIBIT D.—CONTINUED.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.
		Brought forward.....		\$24,185 97
1899				
Dec. 31.....	533	By Ypsilanti Gas Co.....	Lights.....	42 00
31.....	534	" ".....	" ".....	44 00
31.....	535	Frank Smith.....	Supplies.....	4 98
31.....	536	E. Sampson.....	" ".....	7 90
31.....	537	Mich. Bell Telephone Co.....	Use of Line.....	1 25
31.....	538	Tel. & Telephone Const. Co.....	Rent of telephone.....	12 00
31.....	539	S. S. Babcock.....	Contingent.....	200 00
31.....	540	Ypsilanti Gas Co.....	Repairs.....	57 64
31.....	541	" ".....	" ".....	5 25
31.....	542	" ".....	" ".....	9 07
31.....	543	C. D. Stuart.....	Furniture.....	114 75
31.....	544	F. K. Rexford & Sons.....	" ".....	98 03
31.....	545	C. F. Enders.....	Training school supplies.....	50 00
31.....	546	C. N. Ellis.....	Repairs.....	3 54
31.....	547	W. W. Worden.....	" ".....	44 19
31.....	548	" ".....	" ".....	23 86
31.....	549	Hall & Norton.....	" ".....	20 92
31.....	550	Chas. N. Norton.....	" ".....	21 49
31.....	551	E. P. Borison.....	" ".....	25 00
31.....	552	Ypsilanti Gas Co.....	" ".....	18 89
31.....	553	McCullough Bros.....	" ".....	12 97
31.....	554	John Bibb.....	Extra labor.....	8 00
31.....	555	C. F. Enders.....	Furniture.....	172 85
31.....	556	E. M. Comstock & Co.....	Museum.....	4 75
31.....	557	H. Fairchild & Co.....	" ".....	2 75
31.....	558	Lucy A. Osband.....	" ".....	75
31.....	559	Bausch & Lomb Optical Co.....	" ".....	67 50
31.....	560	C. F. Enders.....	" ".....	6 00
31.....	561	" ".....	" ".....	126 35
31.....	562	" ".....	" ".....	69 75
31.....	563	C. D. McLouth.....	" ".....	8 00
31.....	564	Eberbach & Son.....	" ".....	5 90
31.....	565	Harding & Shafer.....	" ".....	9 43
31.....	566	Ward's Nat. Science Establishm't.....	" ".....	452 06
31.....	567	Harding & Shafer.....	" ".....	1 77
31.....	568	D. C. Worcester.....	" ".....	31 40
31.....	569	August Moeller.....	Pianos and organs.....	20 00
31.....	570	Eberbach & Son.....	{ Museum.....	1 23
31.....	571	" ".....	{ Apparatus.....	6 00
31.....	572	" ".....	" ".....	13 18
31.....	573	" ".....	" ".....	52 81
31.....	573	" ".....	" ".....	10 24
31.....	574	" ".....	" ".....	21 68
31.....	575	" ".....	" ".....	18 77
31.....	576	" ".....	" ".....	12 77
31.....	577	Frank Potter.....	Pianos and organs.....	17 50
31.....	578	Herman J. Jaeger.....	Apparatus.....	23 58
31.....	579	E. S. Ritchie & Sons.....	" ".....	56 15
31.....	580	Smith & Osband.....	Museum.....	8 50
31.....	581	" ".....	Printing.....	3 75
31.....	582	Union School Furniture Co.....	Furniture.....	108 00
31.....	583	J. M. B. Sill.....	Repairs.....	53 90
31.....	584	" ".....	" ".....	4 41
31.....	585	" ".....	Contingent.....	13 30
31.....	586	" ".....	Freight and express.....	10 35
31.....	587	Frank Smith.....	Training school supplies.....	3 50
31.....	588	James W. Queen & Co.....	Apparatus.....	38 35
31.....	589	" ".....	" ".....	52 07
31.....	589 1/4	Homer Briggs.....	Freight and express.....	41 61
31.....	589 1/4	Henry F. Coe.....	Repairs.....	5 60
		Carried forward.....		\$26,517 89

EXHIBIT D.—CONTINUED.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.
		Brought forward.....		\$26,517 89
1990.				
Jan. 31.....	590	By L. J. McSweeney.....	Contingent.....	5 00
31.....	591	Detroit Block Works.....	".....	1 50
31.....	592	Pay roll for January.....	Salaries.....	3,882 00
31.....	593	H. H. Tanner.....	Museum.....	27 70
31.....	594	W. H. Judd.....	Contingent.....	7 98
31.....	595	O. E. Thompson & Sons.....	".....	2 25
31.....	596	Folmore & Scoville.....	Repairs.....	1 89
31.....	597	Robbins & Edwards.....	Contingent.....	2 80
31.....	598	Peninsular Paper Co.....	Supplies.....	11 84
31.....	599	E. P. Rorison.....	Contingent.....	7 00
31.....	600	".....	Repairs.....	4 40
31.....	601	John E. Matthews.....	Supplies.....	2 75
31.....	602	Homer Briggs.....	Contingent.....	16 30
31.....	603	Ypsilanti postoffice.....	Postage.....	10 00
31.....	604	Henry T. Coe.....	Printing.....	5 00
31.....	605	J. M. B. Sill.....	{ Contingent.....	1 15
31.....	606	J. H. Emerton.....	{ Freight and express.....	4 30
31.....	607	J. M. B. Sill.....	Apparatus.....	21 50
Feb. 6.....	608	The Richmond & Backus Co.....	Contingent.....	1 00
14.....	609	Normal News.....	Supplies.....	4 75
18.....	609½	The Detroit News Co.....	Advertising.....	25 00
28.....	610	Pay roll for February.....	Supplies.....	27 00
Mar. 31.....	611	Smith & Osband.....	Salaries.....	3,922 00
31.....	612	Ward & Howell.....	Printing.....	24 50
31.....	613	C. D. McLouth.....	Museum.....	26 75
31.....	614	J. M. B. Sill.....	".....	6 60
31.....	615	".....	Extra labor.....	3 50
31.....	616	A. H. Andrews & Co.....	Freight and express.....	2 05
31.....	617	Chicago Kindergarten Supply Co.....	Furniture.....	15 75
31.....	618	O. E. Thompson & Sons.....	Kindergarten supplies.....	18 08
31.....	619	J. S. Lang.....	Contingent.....	3 40
31.....	620	Ypsilanti Gas Co.....	Repairs.....	21 48
31.....	621	".....	Lights.....	44 40
31.....	622	Peninsular Paper Co.....	".....	87 00
31.....	623	".....	Training sch'l suppl's.....	7 28
31.....	624	E. P. Rorison.....	Supplies.....	6 40
31.....	625	W. C. Stevens.....	Repairs.....	24 90
31.....	626	Frank Smith.....	".....	1 10
31.....	627	The Richmond & Backus Co.....	Contingent.....	20 00
31.....	628	Julia A. King.....	Supplies.....	28 75
31.....	629	Pay roll for March.....	".....	5 25
April 21.....	630	MacDonald Bros. & Co.....	Salaries.....	3,922 00
30.....	631	Ypsilanti postoffice.....	Furniture.....	32 00
30.....	632	Charles C. Gerry.....	Postage.....	15 00
30.....	633	Peninsular Paper Co.....	Supplies.....	9 50
30.....	634	J. M. B. Sill.....	".....	11 28
30.....	635	".....	".....	3 40
30.....	636	Frances L. Stewart.....	Contingent.....	4 75
30.....	637	J. M. B. Sill.....	".....	2 80
30.....	638	Bausch & Lomb Optical Co.....	Extra labor.....	3 50
30.....	639	E. P. Rorison.....	Apparatus.....	5 40
30.....	640	S. J. Bemington.....	Repairs.....	60 60
30.....	641	C. D. Stuart.....	".....	7 75
30.....	642	Chicago Kindergarten Supply Co.....	Furniture.....	4 95
30.....	643	O. E. Thompson & Sons.....	Kindergarten supplies.....	39 25
30.....	644	The Richmond & Backus Co.....	Fuel.....	284 20
30.....	645	L. Beckman.....	Supplies.....	2 80
May 1.....	646	Pay roll for April.....	Apparatus.....	6 00
2.....	647	The Richmond & Backus Co.....	Salaries.....	3,922 00
31.....	648	The city of Ypsilanti.....	Supplies.....	3 40
			Water.....	175 00
		Carried forward.....		\$43,275 12

EXHIBIT D.—CONTINUED.

Date.	No. of Voucher.	Payee.	For What Object.	Amount.	
		Brought forward.....		\$43,275 12	
1890.					
May 31.....	649	Frances L. Stewart, clerk.....	Admission fees retur'd	270 00	
31.....	650	Tel. & Telephone Const. Co.....	Rent of telephone.....	12 00	
31.....	651	Robbins & Edwards.....	Repairs.....	6 54	
31.....	652	C. C. Vroman.....	Contingent.....	20 00	
31.....	653	C. W. Rogers.....	Furniture.....	4 63	
			{ Repairs.....	21	
			{ Museum.....	93	
31.....	654	J. M. B. Sill.....	{ Apparatus.....	3 34	
			{ Supplies.....	53	
31.....	655	John Bibb.....	Repairs.....	12 20	
31.....	656	E. P. Rorison.....	".....	55 50	
31.....	657	Ypsilanti Gas Co.....	Lights.....	22 40	
31.....	658	".....	".....	36 40	
31.....	659	Moore & Stewart.....	Supplies.....	11 05	
			{ Contingent.....	1 65	
31.....	660	J. M. B. Sill.....	{ Express.....	25	
			{ Supplies.....	35	
31.....	661	Pay roll for May.....	Salaries.....	8,922 00	
June 30.....	662	Pay roll for June.....	".....	3,922 00	
30.....	663	S. L. Shaw.....	Repairs.....	8 67	
30.....	664	J. M. B. Sill.....	Contingent.....	24 80	
30.....	665	".....	Freight and express.....	1 25	
30.....	666	F. K. Rexford & Sons.....	Furniture.....	177 75	
30.....	667	Ladies' Library Association.....	Contingent.....	200 00	
30.....	668	Hilda Lodeman.....	Diplomas.....	30 50	
30.....	669	Ypsilanti postoffice.....	Postage.....	51 95	
30.....	670	Calvert Lith. & Engraving Co.....	Diplomas.....	230 50	
30.....	671	S. S. Babcock.....	Contingent.....	200 00	
30.....	672	Detroit News Co.....	Supplies.....	18 38	
30.....	673	Clark Cornwell.....	Water.....	66 25	
30.....	674	C. M. Norton.....	Repairs.....	9 65	
30.....	675	Smith & Osband.....	Printing & advertising.....	316 15	
30.....	676	E. P. Rorison.....	Repairs.....	49 63	
			{ Laboratory.....	50	
			{ Museum.....	3 58	
			{ Supplies.....	1 44	
30.....	677	Frank Smith.....	{ Repairs.....	30 21	
			{ Supplies.....	25 82	
30.....	678	".....	".....		
30.....	679	".....	Training sch'l supplies.....	16 85	
30.....	680	Peninsular Paper Co.....	Supplies.....	6 00	
30.....			{ Printing & advertising.....	20 00	
			{ Museum.....	2 50	
30.....	681	Smith & Osband.....	{ Supplies.....	9 75	
30.....	682	Ypsilanti Gas Co.....	Lights.....	27 20	
30.....	683	".....	Repairs.....	1 00	
30.....	684	Henry S. Clark.....	".....	15 75	
30.....	685	Henry T. Coe.....	Training sch'l supplies.....	8 00	
30.....	686	Peninsular Paper Co.....	Supplies.....	7 20	
Mar. 29.....		Transferred to library.....			
					\$53,136 40
					1,500 00
Total credits to current expense for fiscal year.....					\$54,636 40
Balance on hand to new account.....					9,998 00
Deduct transfers.....					\$64,636 40
Total less transfers.....					\$63,136 40

EXHIBIT D.—CONTINUED.

II.—On Account of Building and Special Purposes.

Date.	No. of voucher.	Payee.	Amount.	
1.—Building Additions.				
1889. Sept. 30	173	John M. B. Sill		\$2 14
2.—Library.				
Aug. 1	172	John MacFarlane	\$25 34	
Nov. 16	174	" "	219 85	
Dec. 13	175	New England Publishing Company	5 00	
13	176	John MacFarlane	216 48	
31	177	" "	237 38	
31	178	" "	71 05	
31	179	" "	264 18	
31	180	The Normal Lyceum	75 00	
1890. Feb. 6	181	John MacFarlane	12 00	
14	182	E. H. Strong	7 50	
14	183	Houghton, Mifflin & Co.	6 50	
Mar. 15	184	John MacFarlane	142 35	
17	185	Bacon Bros. Publishing Co.	24 00	
31	186	J. B. Bethel, agent	6 50	
April 9	187	John MacFarlane	87 07	
23	188	" "	185 61	
May 2	189	" "	82 90	
2	190	" "	52 90	
31	191	" "	183 14	
June 30	192	" "	13 35	
30		Balance on hand	1,048 34	
		Total building and special purposes		2,976 89
		Current expense	\$63,136 40	2,979 03
		Building and special purposes	2,979 03	
		Total for all purposes	\$66,115 43	

RECAPITULATION.—Cr.

Current expense 1888-1889	\$50,630 54	
" " 1889-1890	63,136 40	
		\$113,766 94
Building additions, etc., 1888-1889	\$21,529 88	
" " 1889-1890	2,979 03	
		24,508 41
Total for all purpose for two years		\$138,275 35

EXHIBIT E.

SALARY ACCOUNT—DR.

FOR FISCAL YEAR ENDING JUNE 30, 1899.

Date.	Payee.	Amount.	
1898.			
June 30....	To J. M. B. Sill, services for year.....	\$8,500 00	
30....	Daniel Putnam, " ".....	2,500 00	
30....	F. H. Pease, " ".....	2,000 00	
30....	C. F. R. Bellows, " ".....	2,000 00	
30....	A. Lodeman, " ".....	2,000 00	
30....	Austin George, " ".....	2,000 00	
30....	E. A. Strong, " ".....	2,000 00	
30....	F. A. Barbour, " ".....	2,000 00	
30....	John Goodison, " ".....	2,000 00	
30....	B. L. D'Ooge, " ".....	2,000 00	
30....	Julia A. King, " ".....	1,500 00	
30....	Lucy A. Osband, " ".....	1,000 00	
30....	Charles E. St. John, " ".....	1,000 00	
30....	W. A. Weeks, " ".....	800 00	
30....	Abbie Pearce, " ".....	800 00	
30....	Lois McMahon, " ".....	800 00	
30....	Annie A. Paton, " ".....	800 00	
30....	William H. Brooks, " ".....	800 00	
30....	Nina C. Vandewalker, " ".....	800 00	
30....	Geo. F. Key, " ".....	800 00	
30....	C. C. Vroman, " ".....	720 00	
30....	Florence Goodison, " ".....	580 00	
30....	Frances L. Stewart, 10½ months' services.....	488 50	
30....	Amelia Hale, services for year.....	450 00	
30....	W. P. Bowen, " ".....	450 00	
30....	H. W. Miller, " ".....	640 00	
30....	Ella M. Hayes, " ".....	400 00	
30....	James A. Bailly, " ".....	420 00	
30....	C. D. McLouth, " ".....	600 00	
30....	John White, " ".....	355 00	
30....	P. R. Cleary, " ".....	250 00	
30....	Mary L. Lockwood, services for 8 months.....	240 00	
30....	J. B. Arms, services for 5½ months.....	220 00	
30....	Ernest Goodrich, services for 5 months.....	10 00	
Jan. 31....	Volmore L. Stewart, services for 4 months.....	8 00	
1898.			
Aug. 31....	W. H. Smith, services for 1½ months.....	102 00	
Sept. 30....	Fred Pease, services for 1 month.....	2 00	
	CR.		\$37,085 50
Aug. 1....	By Pay roll for July, voucher 264.....	\$220 00	
31....	" " August, voucher 271.....	220 50	
Sept. 29....	" " September, voucher 280.....	3,557 00	
Oct. 30....	" " October, " 284.....	3,557 00	
Nov. 30....	" " November, " 288.....	3,557 00	
Dec. 31....	" " December, " 308.....	3,557 00	
1899.			
Jan. 31....	" " January, " 339.....	3,577 00	
Feb. 28....	" " February, " 342.....	3,597 00	
Mar. 30....	" " March, " 356.....	3,597 00	
April 30....	" " April, " 371.....	3,677 00	
May 31....	" " May, " 400.....	3,782 00	
31....	arrears of salary vouchers Nos. 395, 396, 397, 398 and 399.....	855 00	
June 28....	pay roll for June, voucher No. 401.....	8,742 00	
			\$7,985 50

EXHIBIT F.

SALARY ACCOUNT.—DR.

For Fiscal Year Ending June 30, 1890.

Date.	Payee.	Amount.	
1889.			
June 30	To J. M. B. Sill, services for year.....	\$3,500 00	
30	Daniel Putnam, " "	2,500 00	
30	F. H. Pease, " "	2,000 00	
30	C. F. R. Bellows, " "	2,000 00	
30	A. Lodeman, " "	2,000 00	
30	Austin George, " "	2,000 00	
30	E. A. Strong, " "	2,000 00	
30	F. A. Barbour, " "	2,000 00	
30	John Goodison, " "	2,000 00	
30	B. L. D'Ooge, " "	2,000 00	
30	Julia A. King, " "	1,500 00	
30	Lucy A. Osband, " "	1,000 00	
30	Charles E. St. John, " "	1,000 00	
30	Abbie Pearce, " "	800 00	
30	Lois A. McMahon, " "	800 00	
30	Annie A. Paton, " "	800 00	
30	William H. Brooks, " "	800 00	
30	Nina C. Vandewalker, " "	800 00	
30	George F. Keys, " "	800 00	
30	H. W. Miller, " "	800 00	
30	C. D. McLouth, " "	800 00	
30	Mary F. Lockwood, " "	800 00	
30	Anna M. Soule, " "	800 00	
30	Helen B. Muir, " "	800 00	
30	W. P. Bowen, " "	600 00	
30	C. C. Vroman, " "	720 00	
30	Ella M. Hayes, " "	500 00	
30	Florence Goodison, " "	600 00	
30	Frances L. Stewart, " "	600 00	
30	Lillian Crawford, " "	500 00	
30	James A. Baily, " "	430 00	
30	John White, " "	360 00	
30	Nellie M. Sterling, services for 5 months.....	200 00	
30	P. B. Cleary, " "	250 00	
30	J. B. Arms, " "	480 00	
30	Earnest Goodrich, " "	20 00	
			\$39,550 00
	CR.		
1889.			
Aug. 1	July pay roll, voucher 423.....	\$265 00	
31	August pay roll, voucher 457.....	265 00	
Sept. 30	September pay roll, voucher 459.....	3,862 00	
Oct. 31	Lillian Crawford, " 486.....	10 00	
31	W. P. Bowen, " 486.....	10 00	
31	October pay roll, " 487.....	3,882 00	
Dec. 2	November pay roll, " 490.....	3,882 00	
31	December " 529.....	3,882 00	
1890.			
Jan. 31	January " 592.....	3,882 00	
Feb. 28	February " 610.....	3,922 00	
Mar. 31	March " 629.....	3,922 00	
May 1	April " 646.....	3,922 00	
31	May " 661.....	3,922 00	
June 30	June " 662.....	3,922 00	
			\$39,550 00

EXHIBIT G.—STATE OF MICHIGAN in account with S. S. Babcock, Treasurer of the State Board of Education, for the fiscal year ending June 30, 1889.

Credits.	Building Additions.	Heating Apparatus.	Seating and Furnishing.	Library.	Total of Building, Special, etc.	Current Expenses.	Aggregate.	Aggregate at Close of Balance and Transfers.
By Balance (on hand) July 1, 1888.....	\$7,681 13	\$3,025 00		\$823 25	\$11,529 88	\$255 08	\$11,784 46	
Cash from State Treasury.....	5,825 00		\$4,175 00		10,000 00	43,408 00	53,408 00	\$53,408 00
Loan from.....						148 72	148 72	148 72
Cash from earnings of Institution.....						5,101 50	5,101 50	5,101 50
Cash from other sources.....						231 68	231 68	231 68
Transfer (between funds)—to.....			\$81 47	3,000 00	2,831 47		2,831 47	
Total available during year.....								
By Balance (overdrawn) to new account June 30, 1889.....	\$13,506 13	\$3,025 00	\$4,506 47	\$2,823 25	\$23,860 85	\$40,129 98	\$73,990 83	\$58,574 90
Footings.....	\$13,506 13	\$3,025 00	\$4,506 47	\$2,823 25	\$23,860 85	\$60,630 54	\$73,012 86	\$58,574 90
Debits.								
To Disbursements (exclusive of loans paid).....	\$13,432 97	\$2,714 55	\$4,506 47	\$1,346 36	\$23,060 35	\$48,498 83	\$70,537 17	\$70,537 17
Loans paid.....						148 72	148 72	148 72
Transfer (between funds) from.....	21 02	310 45			331 47	2,000 00	2,331 47	
Total debits during year.....	\$13,503 99	\$3,025 00	\$4,506 47	\$1,346 36	\$23,381 83	\$50,630 54	\$73,012 86	\$70,680 89
To balance (on hand) to new account June 30, 1889.....	2 14			1,476 99	1,476 03			
Footings.....	\$13,506 13	\$3,025 00	\$4,506 47	\$2,823 25	\$23,860 85	\$60,630 54	\$73,012 86	\$70,680 89

EXHIBIT II.—STATE OF MICHIGAN in account with S. S. Babcock, Treasurer of State Board of Education, for the fiscal year ending June 30, 1890.

Credits.	Building Additions.	Library.	Total of Building, Special, etc.	Current Expenses.	Aggregate.	Aggregate exclusive of Balances and Transfers.
By Balance on hand July 1, 1889.....	\$2 14	\$1,476 80	\$1,476 08		\$1,476 08	\$63,178 19
Cash from State Treasury.....				\$39,178 19	39,178 19	5,274 40
Cash from Earnings of Institution.....				5,274 40	5,274 40	183 81
Cash from other sources.....				183 81	183 81	
Transfer (between funds) to.....		1,500 00				
Total available during year ending June 30, 1890.....	\$2 14	\$2,976 80	\$2,976 08	\$64,636 40	\$68,115 43	\$64,636 40
Footings.....	\$2 14	\$2,976 80	\$2,976 08	\$64,636 40	\$68,115 43	\$64,636 40
Debits.						
To Balance (overdrawn) July 1, 1889.....						
Disbursements (exclusive of loans paid).....	\$2 14	\$1,928 55	\$1,930 69	\$1,500 50	\$1,500 50	\$53,568 53
Transfer (between funds) from.....				51,687 84	53,568 53	
				1,200 00		
Total debits during year.....	\$2 14	\$1,928 55	\$1,930 69	\$24,638 40	\$55,069 09	\$53,568 53
To Balance (on hand) to new account June 30, 1890.....		1,046 34	1,046 34	9,988 00	11,046 34	
Footings.....	\$2 14	\$2,976 80	\$2,976 08	\$64,636 40	\$68,115 43	

REPORT OF THE BOARD OF VISITORS.

HON. J. ESTABROOK, *Sup't. Public Instruction*:

DEAR SIR—Your committee of visitors to the State Normal School respectfully submit the following report:

Two of the committee, Messrs. Rankin and Hopkins, visited the school May 21, and Messrs. Rankin and Schurtz, the 22d., the latter spending most of the following day there. We took great pains to observe the practical workings of the entire institution as carefully and thoroughly as possible, and, on the whole, were much pleased with what we saw. It is evident that the board of control and the faculty are endeavoring to give the school a more strictly professional atmosphere than heretofore by lopping off some, at least, of the academic work and substituting therefor a course of instruction better adapted to carry out the great object for which the State Normal exists, viz.: To prepare its students to become efficient teachers in the public schools. With the opening of the new school year, two important changes in this direction go into effect. First, The board of control has decided that "hereafter, graduates of high schools shall be admitted without examination and be credited with studies properly certified as completed." Second, The length of daily session of the training school has been doubled, thus affording students double the opportunity for practice teaching. Heretofore the training school has had only afternoon sessions. It will now have both forenoon and afternoon sessions. Your committee is glad, also, to call attention to the fact that what is known as departmental teaching in the training school is to be done away with in the future. Two members of this committee have visited the Normal School in years past, and were then, as at this time, very unfavorably impressed with that system. It was their intention to speak of what seemed to them its striking defects in as plain words as possible, believing it must have an unfortunate effect on the student-teachers by creating in their minds wrong notions of teaching and organization. Although this system was yet in operation at the time of our visit, we learned that, happily, it was to be discontinued with the close of the year.

In examining blackboard work done by students in the various classrooms it struck us that some teachers were not quite careful enough to insist upon neatness, accuracy and good form. These are all-important things on the part of the teacher, and it would seem that those who are preparing to become teachers can not be too carefully trained to right habits and notions concerning them.

We were greatly pleased with the kindergarten recently added to the training school and believe it must prove a most valuable adjunct to this department. The same may be said of the model first primary grade. Both must surely become important factors toward enlarging the strictly professional character of the Normal School, which should distinguish it sharply from all other schools.

Respectfully,

ORR SCHURTZ,
CHAS. C. HOPKINS,
H. C. RANKIN,
Board of Visitors.

STATE AGRICULTURAL COLLEGE.

REPORT OF THE SECRETARY.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction*:

SIR—I have the honor to submit the report of the State Agricultural College for the collegiate year ending August 15, 1890, as required by section 413 of Howell's Statutes.

The college is under the control of the

STATE BOARD OF AGRICULTURE.

	RESIDENCE.	TERM. EXPIRES.
HON. FRANKLIN WELLS, President of the Board.....	Constantine,	1881
*HON. W. B. MCCREERY.....	Flint,	1893
HON. CHAS. W. GARFIELD.....	Grand Rapids,	1893
HON. OSCAR PALMER.....	Grayling,	1895
HON. A. C. GLIDDEN.....	Paw Paw,	1895
HON. I. H. BUTTERFIELD.....	Lapeer,	1891
HON. HORACE C. SPENCER.....	Flint,	1893

HON. CYRUS G. LUCE, Governor of the State, *Ex Officio*.
OSCAR CLUTE, M. S., President of the College, *Ex Officio*.
HENRY G. REYNOLDS, M. S., Secretary Agricultural College.
B. F. DAVIS, Treasurer, Lansing.

FACULTY AND OTHER OFFICERS.

Oscar Clute, M. S. President.
Theophilus C. Abbot, LL. D., Emeritus Professor of Mental Philosophy and Logic.
Robert C. Kedzie, M. A., M. D., Professor of Chemistry, and Curator of the Chemical Laboratory.
Albert J. Cook, M. S., Professor of Zoölogy and Entomology, and Curator of the General Museum.
William J. Beal, M. S., Ph. D., Professor of Botany and Forestry, and Curator of the Botanical Museum.
†Rolla C. Carpenter, M. S., C. E., M. M. E., Professor of Mathematics and Civil Engineering.
Eugene Davenport, M. S., Professor of Practical Agriculture, and Superintendent of the Farm.
E. A. A. Grange, V. S., Professor of Veterinary Science.
Henry G. Reynolds, M. S., Secretary.
William F. Durand, Ph. D., Professor of Mechanics, and Director of the Shops.
Wendell L. Simpson, 2d Lieut. 24th Infantry, U. S. Army, Professor of Military Science and Tactics.
Levi R. Taft, M. S., Professor of Horticulture and Landscape Gardening, and Superintendent of the Horticultural Department.

*Resigned April, 1890.

†Resigned to accept professorship at Cornell University.

§ Edward P. Anderson, M. A., Ph. D., Professor of English Literature and Modern Languages.

Frank S. Kedzie, M. S., Assistant Professor of Chemistry.

William S. Holdsworth, B. S., Assistant Professor of Drawing.

Philip B. Woodworth, B. S., M. E., Assistant Professor of Physics.

Alvin B. Noble, B. Ph., Assistant Professor of English Literature and Modern Languages.

Nathan D. Corbin, M. S., Assistant Professor of History and Political Economy.

* Clare B. Waldron, B. S., Instructor in Botany.

Henry Thurtell, B. S., Instructor in Mathematics.

† Howard B. Cannon, B. S., Instructor in History.

‡ Frank H. Hall, B. S., Instructor in Mathematics.

Albert B. Cordley, B. S., Instructor in Zoology.

Lyster H. Dewey, B. S., Instructor in Botany.

Luke C. Colburn, B. S., Instructor in Mechanics.

James W. Toumey, B. S., Instructor in Botany.

Jane S. Sinclair, Librarian.

Justus N. Estabrook, B. S., Assistant Secretary.

Louis Knapper, Florist.

Edgar A. Burnett, B. S., Assistant in Agriculture.

Alfred G. Gulley, M. S., Foreman of the Horticultural Department.

William H. Vandervoort, B. S., Foreman of Iron Shops.

H. Campbell, Foreman of Wood Shops.

Henry Munn, Foreman of the Farm.

The attendance for the past year has been greater than ever before. The classes have numbered as follows:

	Mechanical.	Agricultural	Special.	Total.
Post Graduates			30	30
Seniors.....	9	28		37
Juniors	15	34		49
Sophomores.....	28	52		80
Freshmen	59	91		150
Special	2	5	16	23
Total.....	113	210	46	369

The following tabular exhibit shows the attendance for each year since the organization of the college, and also the number graduated each year.

* Resigned to take effect Nov 8, 1889.

† Resigned to take effect July 5, 1890.

‡ Resigned to take effect July 14, 1890.

§ Resigned to take effect Aug. 19, 1890.

Year.	Attendance.			Graduates.
	Agricultural course.	Preparatory department.	Total.	
1887	128		128	
1888	140		140	
1889	98		98	
1890	49		49	
1891	37	29	66	7
1892	44	25	69	5
1893	34	26	60	
1894	29	33	62	5
1895	48	45	93	
1896	57	51	108	2
1897	78	24	97	5
1898	82		82	10
1899	79		79	10
1890	98	36	129	12
1891	141		141	12
1892	181		181	5
1893	148		148	15
1894	121		121	21
1895	156		156	15
1896	164		164	17
1897	154		154	15
1898	289		289	30
1899	232		232	19
1890	264		264	6
1891	221		221	33
1892	216		216	28
1893	185		185	30
1894	171		171	30
1895	178		178	29
1896	200	*36	236	14
1897	206	*57	322	35
1898	258	*59	313	82
1899	247	*98	340	45
1890	256	*113	369	81
Total				518

*Mechanical course.

The two courses of study offered are the agricultural and mechanical, both of which are given in detail below.

In the agricultural course, in addition to class room work, daily manual labor of two or three hours on the farm or garden or in the carpenter shops is required.

The mechanical students are required to spend two hours daily throughout the course at work in the shops, and from one to two hours in free-hand and mechanical drawing.

Military drill is required of students of both courses three hours per week, during the first three years of their course.

COURSES OF INSTRUCTION.

AGRICULTURAL COURSE.

Freshman Year.

AUTUMN TERM.—Algebra—Olney's University. Ancient History—Swinton's Outlines. English—Whitney's Essentials. Elocution—Le Row.

SPRING TERM.—Geometry—Wentworth. Drawing—Free hand. Lectures. Agriculture—Lectures. Declamations.

SUMMER TERM.—Geometry completed. Botany—Gray's Lessons, Gray's Manual. Rhetoric—D. J. Hill. Essays.

Sophomore Year.

AUTUMN TERM.—Algebra completed. Trigonometry—Olney, half term. Military tactics, half term. Botany, half term. Agriculture, half term—Lectures. Declamations and Essays, based on readings from Longfellow.

SPRING TERM.—Trigonometry completed, half term—Olney. Surveying and field work, half term—Bellows. Botany—Laboratory work, two hours daily. Rhetoric—A. S. Hill. Essays. Reading of American Orations.

SUMMER TERM.—Mechanics—Atkinson's Ganot. Elementary Chemistry—Lectures, Bloxam. Chemical manipulation two hours per week, optional. English Literature, half term. Landscape gardening, half term—Lectures. Botany, one day in the week. Original speeches.

Junior Year.

AUTUMN TERM.—Mechanics completed, half term. Anatomy, half term—Lectures, Martin, and Laboratory practice. Horticulture—Lectures, text-book and Laboratory. Organic Chemistry—Lectures. Blowpipe and Volumetric Analysis—Laboratory practice. Essays and public speeches. Shakespeare once a week.

SPRING TERM.—Human and Comparative Physiology—Lectures, Martin. Laboratory work three hours daily for two weeks. Analytical Chemistry—Laboratory work two hours daily, Kedzie's Hand-book. Logic—Jevon's Lessons and Fowler's Inductive Logic. Essays and public speeches. Shakespeare once a week.

SUMMER TERM.—Entomology—Lectures, Cumstock, Cook's Apiary. Laboratory practice three hours a week. Agriculture. Agricultural Chemistry—Lectures. Essays. Shakespeare once a week.

*Senior Year.*¹

AUTUMN TERM.—Psychology—Bascom. Chemical Physics—Atkinson's Ganot, Laboratory Practice. Zoology—Lectures, Packard, and Laboratory work. Agricultural Engineering—Lectures. Veterinary—Lectures, and practical dissection. Critical Essays.

SPRING TERM.—Moral Philosophy, half term. Meteorology—Lectures. Civil Engineering—Davies' Surveying, Lectures. Constitution of the United States, half term—Cooley. Political Economy, half term. Veterinary—Lectures and clinical instruction. Geology, half term—Lectures, Dana. Horticulture, half term—Lectures, and Laboratory practice. Military Science. Essays and Public Speeches.

SUMMER TERM.—Chemistry—Quantitative Analysis. Laboratory Practice. Botany or Forestry—Lectures and Laboratory Practice. Veterinary—Lectures, and clinical instruction. English Literature, Lectures, Select Texts. Philosophy of History, half term—Guizot. Astronomy—Newcomb. Milton once a week. Public Speeches.

MECHANICAL COURSE.

Freshman Year.

AUTUMN TERM.—Free-hand Drawing. Algebra—Olney's University. English—Whitney's Essentials. Elocution—Le Row. Shop Practice.

SPRING TERM.—Mechanical Drawing Elementary Physics—Ganot. Geometry—Wentworth. Declamations. Shop Practice.

SUMMER TERM.—Descriptive Geometry—Church. Elementary Physics. Geometry. Rhetoric—D. J. Hill. Essays. Shop Practice.

¹ All studies elective in this year, except Moral Philosophy.

Sophomore Year.

AUTUMN TERM.—Descriptive Geometry. Algebra completed. Workshop Methods. Military Tactics, half term. Trigonometry, half term—Olney, Loomis' Tables. Essays and Declamations, based on readings from Longfellow. Shop Practice.

SPRING TERM.—Mechanical Drawing. Rhetoric—A. S. Hill. Trigonometry, half term. Surveying—Hodgman, half term. Mechanics—Dana. Essays. Reading of American Orations. Shop Practice.

SUMMER TERM.—Mechanical Drawing. Analytical Geometry—Olney. Elementary Chemistry—Bloxam. Chemical Manipulation, two hours per week—optional. Original Speeches. Shop Practice.

Junior Year.

AUTUMN TERM.—Mechanical Drawing. Metallurgy and Lithology. Calculus—Olney. German or French. Public Speeches. Shop Practice.

SPRING TERM.—Mechanical Drawing. Calculus. Solid Geometry, half term. Analytical Mechanics, half term—Bowser. German or French. Public Speeches. Shop Practice.

SUMMER TERM.—Mechanical Drawing. Analytical Mechanics. German or French. Civil Engineering—Church's Mechanics of Materials. Shop Practice.

Senior Year.

AUTUMN TERM.—Book-keeping and Business Law, half term. Mechanics Completed, half term. Elements of Mechanism. Heat. Technical Readings and Essays. Public Speeches. Shop Practice.

SPRING TERM.—English Literature, Select Texts, half term. Electricity and Magnetism, half term. Civil Engineering or U. S. Constitution and Political Science. Machine Design. Technical Essays.

SUMMER TERM.—Astronomy—Newcomb, and Loomis' Practical. Steam Engineering and Thermodynamics—Wood. Electricity and Magnetism. Public Speeches. Thesis Work in place of Shop Practice.

The text-books mentioned above are those used when the several subjects were last taught, but they are liable to be changed.

During the year, the Agricultural Laboratory has been erected and equipped at a cost of \$8,000.

Early in the spring, the botanical laboratory burned, at a loss to the college of \$11,000 in the building, museum and herbariums. Most of the apparatus and furniture and the greater part of the herbarium were saved.

At about the close of the collegiate year, Congress passed the bill known as the Morrill bill, which is supplemental to the Land Grant Act of 1862, and provides for the more complete endowment of agricultural colleges. The college will receive from the provisions of this act, a payment of \$15,000, the first year, to which \$1,000 will be added each year until the annual payment amounts to \$25,000. This will enable the college to add to its equipment, and greatly increase the efficiency of its work.

Respectfully submitted,

HENRY G. REYNOLDS,

Secretary Michigan State Board of Agriculture.

AGRICULTURAL COLLEGE, }
October 17. 1890. }

MICHIGAN MINING SCHOOL.

REPORT OF THE DIRECTOR AND TREASURER.

To the Honorable Board of Control of the Michigan Mining School :

GENTLEMEN—I have the honor to present to you the report of the Director of the Michigan Mining School for the year 1889-90. Owing to the fact that this institution has been, and to some extent now is, in its organizing stage, the previous reports of my predecessor and myself have been to a great degree informal and partial, touching mainly upon the immediate needs of the institution.

In view of this fact it has been thought best to lay before you a brief sketch of the organization and progress of the Mining School, in which your honorable board and the State of Michigan have been the chief factors.

The bill for the establishment of the Michigan Mining School was presented to the Legislature of the State of Michigan in 1885, by the Hon. Jay A. Hubbell, at present a member of your honorable board, and who may justly be called the father of the Michigan Mining School. The bill was approved May 1st, 1885, and steps were at once taken to carry into effect the provisions of the act.

BOARD OF CONTROL.

Under the authority of the act the Governor of Michigan, with the advice and consent of the Senate, appointed as the six members of the Board of Control Messrs. J. N. Wright of Calumet, Thomas L. Chadbourne of Houghton, Alfred Kidder of Marquette, John Senter of Eagle River, C. H. Cady of Iron Mountain, and John H. Forster of Williamston.

The first meeting of the Board of Control was held at Houghton, July 15, 1885, and organized by the election of Messrs. J. N. Wright and T. L. Chadbourne respectively, as president and secretary of the Board of Control, which offices they have held continuously since. At that time it was decided to locate the school at Houghton.

Owing to the impracticability of Messrs. Cady and Forster attending the necessarily frequent meetings of the Board of Control, on account of their location and the pressure of other duties, their valuable services were lost by their resignation in 1887. Their places were filled by the appointment of the State geologist, Mr. Charles E. Wright, of Marquette, and Mr. Graham Pope of Houghton. Owing to the untimely death of Mr. C. E. Wright in March, 1888, the Michigan Mining School lost a devoted friend, the State a most efficient officer, and the Board of Control one whose experience and education were of the utmost value in the organization and development of the school. Mr. Wright was educated at Berlin and Frei-

berg, and was conversant with the methods employed at the other technical schools of Germany. He had also long been identified with the practical mining interests of Michigan, and this, taken together with his labors as commissioner of mineral statistics and State geologist, rendered him thoroughly familiar with the wants and needs of the mining and geological interests of the State. Mr. J. M. Longyear, of Marquette, was appointed as Mr. Wright's successor in the summer of 1888.

Owing to the needs of his personal business, Mr. Graham Pope resigned from the Board of Control in the summer of 1890. During the trying times of the erection and the equipment of the Michigan Mining School, Mr. Pope's time was freely given, and he was ever ready to assist; and the Director feels that if it had not been for the experience, business ability, and the kindly assistance and advice of Mr. Pope, it would have been impossible to accomplish anything like the amount of work that was accomplished for the school, and with so few mistakes. The buildings, the grading, the reservoir, the water supply, etc., all testify to Mr. Pope's untiring industry and care. Hon. Jay A. Hubbell was appointed as Mr. Pope's successor, in just recognition of his devotion and care for the interests of the Mining School.

From the above it will be seen that the general organization of the Board of Control has been as follows:

	1885-1887.	Term Expires.
John H. Forster, Williamston.....	June 9, 1887.	
John Senter, Eagle River.....	June 9, 1887.	
Alfred Kidder, Marquette.....	June 9, 1889.	
Charles A. Cady, Iron Mountain.....	June 9, 1889.	
James North Wright, Calumet.....	June 9, 1891.	
Thomas Lincoln Chadbourne, Houghton.....	June 9, 1891.	

	1887-1888.	Term Expires.
Alfred Kidder, Marquette.....	June 9, 1889.	
Charles Edward Wright, Marquette.....	June 9, 1889.	
James North Wright, Calumet.....	June 9, 1891.	
Thomas Lincoln Chadbourne, Houghton.....	June 9, 1891.	
Graham Pope, Houghton.....	June 9, 1893.	
John Senter, Eagle River.....	June 9, 1893.	

	1888-1889.	Term Expires.
Alfred Kidder, Marquette.....	June 9, 1889.	
John Monroe Longyear, Marquette.....	June 9, 1889.	
James North Wright, Calumet.....	June 9, 1891.	
Thomas Lincoln Chadbourne, Houghton.....	June 9, 1891.	
Graham Pope, Houghton.....	June 9, 1893.	
John Senter, Eagle River.....	June 9, 1893.	

	1889-1890.	
James North Wright, Calumet.....	June 9, 1891.	
Thomas Lincoln Chadbourne, Houghton.....	June 9, 1891.	
Hon. Jay Abel Hubbell, Houghton.....	June 9, 1893.	
John Senter, Houghton.....	June 9, 1893.	
John Monroe Longyear, Marquette.....	June 9, 1895.	
Alfred Kidder, Marquette.....	June 9, 1895.	

OFFICERS OF THE BOARD OF CONTROL.

James North Wright, President.
 Thomas Lincoln Chadbourne, Secretary.
 Allan Forsyth Rees, Treasurer.

FACULTY.

The faculty was first organized and instruction commenced September 15th, 1886. Albert Williams, Jr., was elected principal of the school and instructor in geology and mining, with John D. Hoffman as instructor in mathematics and drawing, and Robert L. Packard, A. M., as instructor in chemistry.

Mr. Williams is a graduate of the College of New Jersey. He had been for a number of years connected with the United States geological survey in charge of the department of the mineral resources of the United States, and had been engaged in the preparation of several important publications in that department.

Mr. Hoffman was graduated in German schools, and for many years had been in active life in mining engineering in California.

Mr. Packard was graduated at Bowdoin College, and later was instructor in chemistry there. He then became professor of chemistry in the Maine State Agricultural College; afterwards he was examiner in the patent office department, and associated with the bureau of ethnology in Washington, etc.

At the close of the school year Messrs. Williams and Hoffman resigned, and the following changes were made in the faculty. M. E. Wadsworth was elected director and professor of mineralogy, petrography, and geology, and R. M. Edwards, professor of mining and engineering.

Mr. R. M. Edwards had graduated with high rank at the Columbia School of Mines, and had had considerable practical experience in mining engineering.

In 1888 the faculty was increased by the appointment of Mr. Fred F. Sharpless, a graduate of the University of Michigan, as instructor in chemistry and metallurgy; and by the appointment of Mr. R. C. Pryor, one of the advanced students of the Mining School, as instructor in mathematics and drawing for one year.

In 1889 Dr. R. G. C. Moldenke was elected professor of drawing and mechanical engineering, and Mr. G. H. Perkins, instructor in mathematics and physics.

Dr. Moldenke is a graduate and post-graduate of the Columbia School of Mines, and had had considerable and varied experience as an electrical and mechanical engineer.

Mr. Perkins is a graduate of Harvard University, and had pursued post-graduate studies there, as well as having had subsequent experience in teaching.

In January, 1890, Professor R. M. Edwards resigned to accept the important position of mining engineer for the Tamarack, Osceola and Kearsarge mines. Mr. Edwards had proved himself an able, faithful, and efficient teacher—one who had both the genius and art of imparting to others that which he himself knew. As this faculty is very rare, and as without it a teacher is worthless, no matter what his knowledge and abilities in other directions may be, Mr. Edwards' resignation was accepted with the deepest regret. Fortunately the school was able to obtain as Mr. Edwards' successor Mr. F. W. Denton, also a graduate of the Columbia School of Mines, and at that time an instructor in that institution.

In the spring of 1890, Messrs. Packard, Moldenke and Perkins resigned, and Messrs. H. F. Keller, Edgar Kidwell and A. E. Haynes were elected to fill their respective places.

Mr. Haynes, a graduate of Hillsdale College, had been professor of mathematics and physics at Hillsdale College for some fifteen years, and previously had taught there and elsewhere. This had given him an extended experience as an educator, and his general acquaintance with the teachers and educators of this State is of great advantage to this institution.

Dr. Keller is a graduate of the university of Pennsylvania and had taken his doctor's degree at the University of Strassburg. He had also studied at Wiesbaden, had taught for some years at the University of Pennsylvania, and had had much practical experience in assaying and metallurgical work in the mining regions of the west.

Mr. Kidwell is a graduate of Georgetown College, and later graduated in the department of mechanical engineering at the University of Pennsylvania, at which institution he served as an instructor in mechanical engineering, until called here.

OFFICERS OF THE MICHIGAN MINING SCHOOL, 1880-1891.

Marshman Edward Wadsworth, A. M., Ph. D. (Harvard University), director.

Professor of mineralogy, petrography and geology.

Arthur Edwin Haynes, M. S., M. Ph. (Hillsdale College), professor of mathematics.

Harry Frederick Keller, B. S., Ph. D. (Strassburg University), professor of chemistry and assaying.

Alered Church Lane, A. M., Ph. D. (Harvard University), instructor in petrography and geology.

Edgar Kidwell, A. M., M. E. (University of Pennsylvania), instructor in drawing and mechanical engineering.

Fred Fraley Sharpless, S. B. (University of Michigan), instructor in chemistry and metallurgy.

Fred Warner Denton, C. E. (Columbia School of Mines), instructor in mining and engineering.

Arthur Edmund Seaman, assistant in mineralogy.

Walter John Baldwin, S. B. (University of Michigan), assistant in mineralogy.

Robert Irwin Rees, librarian and clerk.

Henry Gibbs, janitor: in charge of the chemical supply room.

Patrick Robert Dillon engineer and assistant janitor.

STUDENTS.

The Michigan Mining School was first opened to students September 15, 1886, and during the school year 1886-1887 twenty-three pupils were enrolled. The students were classed into three divisions: First division, second division, and special students—numbering respectively seven, nine and seven members. The first division comprised all the pupils of the school that were able to enter upon the full work of the school at its commencement, or were the only ones that could graduate in the regular course in the specified time. The second division was composed of preparatory students who were engaged in elementary studies preparing to enter upon the full course at the beginning of the next school year. The special students were persons that joined the school to do work in chemistry for a greater or less time according to their opportunities.

During the year 1887-1888 twenty-nine students were enrolled. This year the students were first divided into classes according to their date of graduation, while the preparatory class or second division was discontinued. This year the classes numbered as follows: Class of 1888, eight; class of 1889, 21 members. At the end of the school year seven students were graduated.

In the school year 1888-89, forty pupils were registered, divided as follows: Graduate students two, class of 1889 twenty, and class of 1890, eighteen members. This year six students were graduated.

At the close of this year the course was increased to three years and the requirements for admission raised. Each of these changes served to diminish the attendance, and only thirty-five pupils were enrolled, during 1889-90, divided as follows: Graduate students, two; class of 1890, six; class of 1891, sixteen; class of 1892, eleven. At the close of this year seven students were graduated.

The school year 1890-91 has now about half expired, and is the fifth year since the school was open to pupils, that is, the school is now only four and one-half years old. So far this year 61 pupils have been enrolled, a number which promises to be increased before the close of the school year. The students for this school year are divided as follows: Graduate students, three; class of 1891, nine; class of 1892, eight; class of 1893, forty-one, or six more than the entire number of all the students of the Mining School last year. It is to be remembered that this is the first year that the school has entered upon its work with anything like suitable accommodations and equipment for the classes expected, which in this case far outnumbered our expectations or preparations. There is every reason to believe that the next incoming class will be as large as, or larger than the present, since there have been received statements from a large number of persons that they were preparing to enter at the next school year. During the four and one-half years of the school's existence one hundred and eleven pupils have attended.

Number of college graduates.....	8
Ratio to whole number of students.....	7½ per cent.
Number of students entering Mining School from colleges or schools of equal grade.....	31
Ratio to whole number of students.....	28 per cent

NUMBER OF STUDENTS ENTERING NEW EACH YEAR.

1886.....	23
1887.....	15
1888.....	18
1889.....	13
1890.....	42

Total..... 111

Percentage decrease from 1886 to 1887.....	35 per cent.
Percentage increase from 1887 to 1888.....	20 per cent.
Percentage decrease from 1888 to 1889.....	29 per cent.
Percentage increase from 1889 to 1890.....	215 per cent.

The past year, in contrast with the preceding year, shows a marked increase in attendance, coincident with the completion of the buildings and equipment provided for by the legislatures of 1887 and 1889; since it takes at least two years after appropriations for equipment and building

have been made, before the results of those appropriations can be secured.

TOTAL NUMBER OF STUDENTS EACH YEAR.

1886-87	23
1887-88	29
1888-89	40
1889-90	35
1890-91	61
Percentage increase from 1886-87 to 1887-88	26 per cent.
Percentage increase from 1887-88 to 1888-89	38 per cent.
Percentage decrease from 1888-89 to 1889-90	12½ per cent.
Percentage increase from 1889-90 to 1890-91	74¼ per cent.
Percentage increase from 1886-87 to 1890-91	165 per cent.

NUMBER OF STUDENTS FROM EACH STATE AND COUNTRY.

Canada	1
Colorado	1
Illinois	4
Japan	1
Massachusetts	1
Michigan	89
New York	2
Ohio	1
Oregon	1
Pennsylvania	1
Utah	1
Wisconsin	8
Total	111

The above table shows that of the 111 pupils that have attended the school, 89 were residents of the State, or only 22 came from other districts than Michigan. Of the others Wisconsin furnished eight and Illinois four.

OCCUPATION OF FATHER.

Agent Canal Company.....	2	Merchant, commission.....	2
Butcher.....	2	Miller.....	1
Book-keeper.....	1	Millwright.....	1
Carpenter.....	2	Mine capitalist.....	3
Cashier.....	1	Mine clerk.....	1
Clergyman.....	2	Mine superintendent.....	9
Clerk.....	2	Mine surface boss.....	1
College president.....	1	Mine surface laborer.....	1
Commercial agent.....	1	Mining.....	3
Copper refiner.....	1	Mining captain.....	1
Deceased.....	19	Miner.....	1
Drayman.....	1	Physician.....	1
Druggist.....	1	Purchasing agent.....	1
Editor.....	2	Railroad manager.....	1
Engineer, civil.....	2	Real estate.....	2
Express agent.....	1	Retired.....	4
Farmer.....	11	Riding school superintendent.....	1
Harness maker.....	1	Salesman.....	1
Insurance agent.....	2	Secretary.....	1
Lawyer.....	3	Stockraiser.....	1
Lumberman.....	5	Towing.....	2
Machinist.....	2	U. S. commissioner.....	1
Marshall.....	1	U. S. internal revenue collector.....	1
Merchant.....	4		
Total.....			111

Forty-seven different classes.

The table showing the occupation of the fathers of the pupils is of interest as indicating the varied walks of life from which the latter come, proving that this education is desired by all classes, especially by those that have their own way to make in the world, and whose parents are poor or have only limited means. Including those whose fathers are deceased, 47 different classes or occupations are noted in the list or one to every two and one-third students.

Of these, the largest number is of those whose fathers are deceased, and the next largest number is composed of those whose fathers are engaged in farming. Mine superintendents, lumbermen and men retired from active business make the next largest classes.

Number of graduates each year in mining engineering courses.

Year.	School of Mines, Columbia College.	Massachusetts Institute of Technology.	University of California.	University of Michigan.	Harvard University.	Lehigh University.	Lafayette College.	Washington University.	University of Pennsylvania.	University of Wisconsin.	University of Illinois.	Ohio State University.	Missouri School of Mines.	Colorado School of Mines.	Michigan Mining School.	Dakota School of Mines.	College of Montana.	University of Minnesota.	Michigan Agricultural College.	Total number of students in the University of Michigan.
1841																				*
1842																				25
1843																				23
1844																				58
1845																				52
1846																				70
1847																				70
1848																				83
1849																				84
1850																				72
1851																				64
1852																				
1853																				
1854																				
1855																				416
1856																				453
1857																				480
1858																				450
1859																				429
1860																				527
1861																				674
1862																				615
1863																				652
1864																				856
1865																				958
1866																				1,236
1867																				971
1868																				1,223
1869																				1,114
1870																				1,112
1871																				1,110
1872																				1,207
1873																				1,168
1874																				1,106
1875																				1,191
1876																				1,127
1877																				1,110
1878																				1,290
1879																				1,372
1880																				1,427
1881																				1,584
1882																				1,584
1883																				1,440
1884																				1,377
1885																				1,285
1886																				1,401
1887																				1,572
1888																				1,667
1889																				1,882
1890																				2,153
Total graduates	879	113	48	40	8	53	39	35	47	18	5	20	23	8	20	1	0	0		
Students 1890-91	42	28	29	6	0	52	16	15	2	2	0	19	12	4	61	2	14	0		

* This designates the year the course of instruction was established.

The preceding table shows the number of students who have graduated in the different schools of this country, in the courses of Mining Engineering. In most cases it does not include all the graduates of the school, but only those who have graduated in Mining Engineering; although it covers in some cases, like Lehigh University, the major part of its graduates in Metallurgical Engineering, as well as in Mining Engineering. In the case of the Massachusetts Institute of Technology, those who graduate as Metallurgical Engineers are given the same degree with the Mining Engineers, and are numbered together in the above list. The same is also true of several of the other institutions, I believe.

At the present time the Michigan Mining School is the only pure school of Mining Engineering in the United States, as all the rest have several other courses of instruction and give other degrees. In the majority of schools the other courses of instruction are the most prominent, and the Mining Engineering course is made up of what is left after the other courses have had what they wish. The School of Mines of Columbia College is a notable case, in which the Mining Engineering work has been one of its prominent features, and it has graduated more than three times as many Mining Engineers as any other school in the United States. Being located in New York City, backed by the wealthiest college in the United States, having an immense body of students to draw from, and the prestige of being the first successful school of its kind in this country, it has had every advantage and opportunity.

It may be pointed out to those who judge a school by the number of its graduates, that during its first four years the Michigan Mining School graduated 20 men, while the Massachusetts Institute of Technology required eight years to graduate 21 men in mining engineering; that the University of Michigan only graduated 20 men in twelve years, and only forty men in twenty-five years. Harvard University graduated eight men in eleven years; Lehigh University was seventeen years in graduating nineteen men, and has only graduated 53 in the twenty-four years her course of mining engineering has been given. Lafayette College has graduated 39 men in the same time (twenty-four years); Washington University, although situated in the large city of St. Louis, graduated only 19 men in eleven years, and only 35 men in nineteen years. The University of Pennsylvania, located at Philadelphia, has graduated only 47 men in sixteen years, the University of Wisconsin, 13 men in nineteen years; the University of Illinois only five men in twenty-two years. The Ohio State University has graduated 20 men in the twelve years it has graduated classes in mining engineering.

Coming now to the schools that rank more distinctly as state mining schools, it will be seen that the Missouri School of Mines has graduated 23 men in nineteen years; the Colorado School of Mines 8 men in sixteen years; the Dakota School of Mines one man in three years. It can also be seen from the above table that the Michigan Mining School graduated the largest class in 1890 of any school in the courses in mining engineering given in this country, and that during the year 1890-91 it has the largest number of pupils taking mining engineering studies of any school in the United States.

The State of Michigan has justly been proud of the fact that she had the largest University and Agricultural College in the United States. To this she can now add the largest School of Mining Engineering, and one

whose record has only been surpassed heretofore by the School of Mines of Columbia College.

In looking over the record of the number of pupils in attendance in the different institutions in 1890-91, it will be seen that Lehigh University ranks next below the Michigan Mining School, while the Columbia College School of Mines ranks third. In the case of the Massachusetts Institute of Technology, the students in the first year in all the courses are placed together; therefore, if it were known how many of that class were to take mining engineering, the number in attendance would be increased beyond 28, which gives the number in the three higher classes only. The past experience shows, however, that if the choice of the first year men were known the total number of mining engineering students would still fall below the number of such students in the School of Mines of Columbia College.

At Washington University the number would also be somewhat increased if the choice of the students in the first two years were known, as it is in the last three, this institution having a five years' course. Definite information has not been received from the University of Michigan, but the best obtained shows that there are not over six, if that number, in mining engineering. Last year there were eight.

The relative rank in numbers of the different courses in mining engineering would stand about as follows:

1. Michigan Mining School, Houghton, Michigan.
2. Lehigh University, South Bethlehem, Pa.
3. School of Mines, Columbia College, New York City.
4. Massachusetts Institute of Technology, Boston, Mass.
5. University of California, Berkeley, Cal.
6. Washington University, St. Louis, Mo.
7. Ohio State University, Columbus, Ohio.
8. Lafayette College, Easton, Pa.
9. College of Montana, Deer Lodge, Montana.
10. Missouri School of Mines, Rolla, Mo.
11. University of Michigan, Ann Arbor, Michigan.
12. Colorado School of Mines, Golden, Col.
13. University of Pennsylvania, Philadelphia, Pa.
14. University of Wisconsin, Madison, Wisconsin.
15. Dakota School of Mines, Rapid City, S. D.
16. University of Illinois, Urbana, Illinois.
17. University of Minnesota, Minneapolis, Minn.

It is to be distinctly understood that the above comparison applies only to the number of pupils in mining engineering, and has nothing to do with the relative number of pupils in other departments.

It is not proper to make any comparison of the number of students in a special or technical school like the Michigan Mining School, with those in schools that give more general education, like the University of Michigan, the Michigan Agricultural College and the Michigan Normal School, but yet it may be pointed out that the University of Michigan graduated only 11 men in its first four years, the Normal School the same number, and the Agricultural College none, and only 19 men in the first seven years. As a matter of comparison there are given in the above table, the number of graduates each year from the Agricultural College, and the number of students in the same, also so far as known, the number of students each year in the University of Michigan. In looking at the State Agricultural

College it is to be remembered that it starts on a lower plane, as candidates need be only fifteen years of age, and to pass in arithmetic, geography, grammar, reading, spelling, penmanship and history of the United States. Further, although in advance in certain studies, its graduates have always entered into the first year of the course in the Michigan Mining School. It is also to be remembered that the Agricultural College had for many years a preparatory department and that the above list contains the preparatory students. The Agricultural College was established February 12, 1855, but was not open for students until May 13, 1857, at which time it had 676 acres of land, a boarding hall, forty-three by eighty-two feet, three stories and basement, a stable twenty-eight by forty feet, and four brick dwelling houses for the professors. On the other hand the Mining School did not have its building and equipment in any proper shape for students' work until the summer of 1890, or this is the first year in which its condition to give instruction would compare with the condition of the Agricultural College at the time it was opened to students; not taking into consideration that here no provision whatever has been made for the accommodation of either students or faculty.

The University of Michigan was organized March 18, 1837. In 1839 there were in existence eight fitting schools (called branches) established to prepare students for the University, when it should be opened. That year \$4,000 was appropriated for minerals, and one professor sent to Europe with \$5,000 to be expended for books, while the expenditures for that year were \$45,000. In 1840 there were nine fitting schools (branches) and the expenditures were \$52,040.76. In 1841 there were seven fitting schools (branches) and the University itself was opened on September 20 of that year. Yet in spite of all this preparation, having schools for no other purpose than to prepare pupils against the time of opening, having buildings erected for school work, and also for the accommodation of both students and faculty, only twenty-five pupils were present the first year.

In 1843 the library contained 4,000 volumes, and the mineralogical and geological collections 385,000 specimens. There were, however, but twenty-three students, and the institution was greatly embarrassed. Indeed Governor Barry stated in his message that the University has expended \$100,000 beyond its income and had little or nothing to show for it except buildings, library and apparatus.

In 1844, there were fifty-three students, and there was strong discussion of closing the University. Indeed petitions were sent in by the people of the State asking that it be closed, on the ground that it was of little or no good to the State. "Verily, history repeats itself."

In 1845 it had fifty-two students and sent out eleven graduates. Its increase since that time can readily be seen in the number of students given in the table above. What would have been the history of Michigan if this great and noble educational institution had been closed in its infancy as was desired, and when, considering the general nature of the education it was giving, it had not shown one-tenth of the strength the Mining School has shown.

We may further consider some other points in connection with the University and Agricultural College. If one looks at the relation of the number of graduates to the number of pupils in the Agricultural College, it will be found to be a variable ratio, that appears to be determined to a greater or less extent by the quality of the pupils in certain classes and

the numbers in each class, rather than the total numbers in the school. Too many factors enter into the question of graduating a man to make the number of its graduates the sole criterion of an institution.

After the first three years the number of pupils remained approximately uniform in the Agricultural College until 1870, never falling below 49 or rising above 108. That year the number rose from 79 the preceding year to 129, and there remained between 121 and 164 for eight years. In 1878 the number rose from 154 in the preceding year to 239 that year, and for five years varied between 216 and 264. In 1883 the number fell to 185 and the next year to 171. In 1886 the number rose to 296, and reached the maximum 370 in 1890. The decided advances in the number of students came abruptly and then remained approximately constant, while decided losses in students appear to have been gradual—this is especially noticeable from 1881 to 1885.

In considering the number of pupils in the University of Michigan it will be seen that in ten years after the establishment of the institution there were 64, or only three more than the number enrolled at the Mining School during the first half of its fifth year. From 1851 to 1855 we have no record of the number of students, but at that time the number was 416, reaching 1,255 in 1867, after which for eleven years no higher number was reached and it even fell to 1,105. After 1878 the number rose to 1,534 in the years 1881 and 1882, when it commenced falling going down to 1,295 in 1885. Here again commenced a rising period, which has lasted until the present. The figures show many sudden rises in numbers, but no commensurate sudden decrease; and such we believe will be the case at the Mining School.

REQUIREMENTS FOR ADMISSION.

When the Mining School was first opened, in the autumn of 1886, it was required for the candidate for admission, that he should be sixteen years old and have a knowledge of English grammar, geography, the elementary principles of natural history, arithmetic, metric system, algebra and plane geometry. These requirements were given in the Prospectus issued July 12, 1886.

No change was made in the admission requirements until the first catalogue was issued in the spring of 1888. After due consideration of the fact that the Mining School was the only institution for higher instruction in the Upper Peninsula of Michigan, it was decided that the closest possible relations should be maintained between this school and the various high schools, not only in the Upper Peninsula, but also throughout the State. This connection is one that ought to be of great assistance to the high schools in serving as an inducement to keep the young men in these schools until graduation.

As a fact comparatively few have been in the habit of completing the high school course, owing to the demand for labor in this region. It was sought to remedy this evil, as well as to bring about a closer connection between the high schools and the Mining School, and on these accounts it was determined to receive the pupils on the certificate of the principals or superintendents of the high schools, provided the pupils should have graduated with a rank of not less than 75 per cent on a scale of 100 in every study required for admission here. It was then required that the candidate for admission should be seventeen years of age, and should pass in arithmetic, metric system, book-keeping, algebra, through quadratic

equations, plane geometry, elements of physics and elements of descriptive astronomy. A rank of sixty per cent was decided upon for entrance on the part of persons examined at the school or in passing from one class to another.

The reasons that no requirements were made in other English branches were:

1. The variability in the subjects taught in the schools, which would interfere with insisting upon definite subjects, and the fact that all students coming from the schools will have passed in several other subjects than those required.

2. It was thought best to follow the example of the medical, law, and other professional schools, in requiring the subjects that it was absolutely essential that the students should have, to pursue the course of study in this institution, in hopes to obtain a greater thoroughness in that preparation.

3. There are many men of excellent ability who have not the advantage of an early education, and it is not desirable to insert any non-essential requirements which should deter them from obtaining whatever education they can, especially since the Mining School was established in part for their benefit.

At the time the next catalogue was issued, in the summer of 1889, solid and spherical geometry were added to the requirements, and the rank to enter upon examination, or to pass from class to class, was raised to 75 per cent. The rank required for entrance on certificate was raised to 85 per cent. This was done because it was found that it is the general custom of the high schools in this section of the country to mark much higher, relatively to the amount of work done, than the schools of New England do. This rendered it necessary to take and maintain a rank that would yield an adequate preparation for the course of study to be followed.

However valuable a reading (at least) knowledge of French, German and other languages may be to the Mining Engineer, it is true that we could not require them for admission unless we shut out almost all those whom the Mining School was founded to help. The only thing this school can do is to concern itself about the essentials for its work. It therefore presumes that the preparatory and literary education of the pupil has been completed before entering upon his professional studies here; but it does urge upon all, who can do so, to obtain the broadest, highest and most liberal education possible before they enter this school, since if other things are equal, it enables the pupil to profit far more by his course here and to take a higher plane after graduating.

One of the serious difficulties in the high school work is that too many of them are attempting to teach subjects that properly belong to colleges and advanced schools. The high schools generally have neither means nor material to do this work, which requires special facilities and specialists as teachers. For preparation for entrance to the Mining School, teachers are urged to give special attention to the proficiency of their pupils in the use of the English language and the special subjects required for admission. Particular attention should be given to practice in the solution of practical problems in mathematics, so that the pupil may be familiar with, and practiced in, the use of mathematical principles; as the solution of problems is, for the student of mathematics, his laboratory work. Thoroughness in the work done is to be aimed at rather than the quantity.

No change was made in the requirements for admission in the catalogue issued in the summer of 1890, as it is believed that for the present the high schools have taken all they can well accomplish; and as a matter of actual fact, it is yet too early to fully ascertain the effect of the present requirements. The difficulty so far has not been in the lack of quantity required, but in the lack of thoroughness of work and cultivation of the reasoning power, on the part of the pupil, that makes his preparation so unsatisfactory.

If the time shall come when the high schools will prepare their pupils in trigonometry and algebra complete for admission, it would relieve our course of study of much work and enable us to do better and higher work.

COURSE OF INSTRUCTION.

The Michigan Mining School was organized to prepare men to assist in the practical development of the mineral wealth of the country. The school is therefore not intended to give its pupils the ordinary general and theoretical education afforded elsewhere in the usual courses in mining engineering, but on account of the special location of the institution, it aims to unite both theoretical and practical mining work in one harmonious whole. In other words, it is intended, in connection with the school, to teach students the principles they will need for their future life work, and to give them practice in the application of these principles in the mill, mine, laboratory and workshop so that on graduating they will be able to take their places as productive and useful members of the community to which they belong. The Michigan Mining School is not intended to be a scientific school in the ordinary sense, nor to concern itself with general education, but to be in the true sense a professional school, in which all its pupils are not studying to obtain an education for the purpose of mental cultivation alone, but to obtain an education and practical training in a profession which they expect to follow on leaving the school. This can be done more easily here than almost anywhere else, since the sole object of the Mining School is to train men in mining engineering, or in such specialties as they may need in connection with the development of the mineral wealth of the State and Nation.

In all other schools in the United States, the mining engineering course is carried on in connection with other studies, and is often looked upon as a subject of less importance. This usually results in a crude and insufficient instruction, the main object of which seems to be to produce anything except mining engineering. How much real mining engineering can one or two students learn when they are sandwiched among hundreds of students, where the aim of the latter and of their teachers is to give them a training that will prepare them to take up the study of law, divinity, medicine—in short, everything except mining engineering? Students may under such conditions, learn well many subjects, but mining engineering is not one of them. We claim that it is just as impossible to give proper training in mining engineering without access to a mine, as it is to train a properly equipped physician without hospital practice; a clergyman without putting him into the pulpit; or to train a farmer in the methods of practical agriculture among the "bulls" of Wall Street. Men who are to do any good work must either obtain a practical knowledge of the subject they are studying prior to or during their school life, or else they must learn it afterwards at the expense of their employers. Men are graduated

all over this country in courses in mining engineering that have never seen a mine, and they are no more fitted for mining engineers, than would be a city boy for a practical farmer, when he had been taught agriculture in the midst of a crowded city and had never been outside of it. They may, and generally do, have ability enough to overcome their defective education, but no one can claim that this is the best way to obtain an education for such work. A certain institution in the United States foremost in its mining engineering course, as well as in other courses, graduates its students in mining engineering without requiring them to have ever seen a mine, or to have any practical knowledge of its work. Such graduates know as much about mines and real mining, as a blind man does about the appearance of the moon, their knowledge is derived from second-hand information only. That students of mining engineering should have a practical knowledge of mines is recognized by many institutions, in requiring their students to spend a few weeks or more in some mining districts, and also in the location of some of these schools in the midst of mining regions, which places them in a mining atmosphere, and imbues them with a mining spirit.

In the prospectus issued by my predecessor, the regular course was announced to occupy two years, and to embrace the subjects of geology, mineralogy, lithology, chemistry, assaying, mathematics, physics, mining, metallurgy, surveying, drawing and shop work. Further than this no course of instruction was laid down, and beyond these limits the Mining School was entirely unorganized when it passed under my charge, in September, 1887.

During the first year, 1886-87, instruction was given in General Chemistry (Eliot and Storer, with Laboratory Practice), Qualitative Analysis (Fresenius, with Laboratory Practice), General Geology (LeConte's Elements), Metallurgy, Mining, Ore Deposits, Algebra (Olney), Geometry (Welsh), Surveying, Drawing, and Plane Trigonometry (Chauvenet). The time occupied was five hours a day for five days a week, while there were two terms, one of 14 weeks, and the other commencing in January and extending for 25 weeks, making 39 weeks in all.

In his experience as an educator, which extends over twenty-seven years, the writer never found himself confronted by so apparently hopeless a task as he found before him the morning he commenced his labors, ten days before the term opened, in 1887. Not only was there no course of study, but there was only one member of the faculty left, and he in parts unknown; the rooms were unsuited and insufficient for the work; there was almost no suitable equipment for instruction, except in the chemical department, and that was totally inadequate to the needs of the School; there was no clerical help, and funds were limited. Moreover there was the depressing knowledge that heretofore all state mining schools had been obliged to pass through a long period of hostility and trial, constantly interfered with by contradictory legislation, with insufficient support, and left to struggle along as best they might. One of the worst features was the almost universal feeling throughout the State, that the Mining School was but an experiment, and that it would shortly expire from inanition—a feeling which even some of its devoted friends shared to some degree.

To offset this there were three factors:

1st. Its enemies considered it so sure to die, that they did not think it worth while to put forth any effort to strangle it.

2d. The efforts of the Board of Control were earnest and untiring during the long, dreary year that followed; it never failed to aid, and never interfered.

3d. A building had already been provided for.

The first necessity at the time the writer commenced his work, Sept. 5 1887, was to arrange a course of study, and to obtain the effective means to carry it out, including a suitable faculty, equipment, etc. The course of study to be adopted was of necessity subject to certain limitations:

1st. Owing to statements in the Prospectus for 1886, it must be limited to two years.

2d. It must be suited to the equipment that could be obtained, to the rooms, and to the strength of the faculty, then numbering three members, including the writer.

3d. It must be adapted to the conditions of the district and to the grade of pupils expected.

4th. It must prepare the pupils, so far as possible, for the needs of the mines of Michigan.

It did not seem proper or right to attempt to establish any of the common scientific courses, in which the professional studies occupied only a portion of the last year; as there was no hope of being able to compete with the other numerous and well endowed scientific schools throughout the country. In theoretical education all these schools could do better on account of their large libraries, large faculties, and the means of general instruction, which this institution could never hope to obtain unless through the means of private benefactions. The only apparent hope of success lay in establishing a course of study that should be different from any other course known in this country—one that should be strictly professional and practical in its aims, and thus not interfere with the work of older and established institutions. Advantage, too, needed to be taken of the peculiar location of the school in an old (for the United States) and important mining district. At this point we should remember that a claim is made by many, that the Mining School should have been established in connection with some older and well organized institution, so as to have saved much of the expense of equipment of library and faculty. So far as these items are concerned, the claim is true to some extent; but the cost of these things is a mere nothing, compared with the value of the other and all important means of instruction that the Mining School has at its doors, and which no other school can have, unless similarly situated. It is impossible for any of the other state schools in Michigan to place by their side mines of every grade and description, from mere open pits to mines nearly 4,000 feet in depth, hoisting and pumping engines of every grade up to 2,700 horse power; in short to have almost every appliance of mining, unless they would spend millions for the thousands the Mining School has spent for libraries, equipment and teachers. Yet the use of all the millions of capital invested in the mines and mining work of Northern Michigan is freely given to the Mining School, thereby, in practical advantages for the Mining Engineer, far outweighing all the disadvantages of having to erect buildings and obtain equipment. Again, at the time this school was established, there was no other state school in Michigan that would not have had to erect new buildings, and greatly increase its equipment, library and faculty, had it undertaken to do the work the Mining School is now doing.

In view of the fact above stated, the Director, with the advice and

assistance of the other two members of the faculty, arranged a course of instruction for 1887-1888 to correspond to the previously advertised two years course. At this time it was plainly evident that two years was too short a time properly to train students for their duties in mining, and that the course would have to be increased to three years at the very least. In view of this fact a proposed course was also arranged for three years and published.

In the course of study for 1887-1888 a strong effort was made to introduce as much practical work as possible, taking advantage of the location of the school. The hours each day were increased to six, and more or less frequent excursions were made to the mines and mills, or devoted to geological field work on Saturdays. The school work was also distributed over three terms.

I cannot speak too highly of the untiring and painstaking labors of Professor Edwards in taking upon himself the largest share of the burden of instruction during this year. To his labors much of the success of the Mining School is due. His work especially in the winter term, went far beyond that which the course of study shows was assigned to him.

During the year 1888-1889, the two years course was somewhat modified and the three years course adopted, to go into effect in 1889, for all students entering at that time. All the changes were made with the hope of giving the students better training and of increasing the practical side of the work here.

In 1889 the three years course of study went into general effect, all the students voluntarily changing from the old two years course to the new one, because of the superiority of the scheme for the latter; but the school suffered a decrease in students, not only on account of the additional requirements, but also on account of the increased length of the course. Although each of these changes temporarily weakened the school in numbers, there can be no doubt that now they have greatly strengthened it.

The course was considerably modified for 1890, the hours each day being increased to seven. The hours in all cases mean the actual hours spent in the class room or laboratory, and not in the time taken in preparation which must be done outside school hours. The school work was further increased by putting into the course summer work, in order to make the school of more practical use to teachers, miners and others, that might be able to give their summers to such work, but who were unable to take the full school course. The situation of the school and the coolness of the summer climate in this region enable this to be done. Furthermore, work of this kind serves as a vacation for the regular student and assists him to become far better fitted for his future practical work than he otherwise could be, and enables the school to accomplish far more than it otherwise could do in the same number of years.

With various changes in the faculty, and with the increasing demands of mining education, a number of changes have been introduced into the course, part of which will go into effect this year and a part next. With the exception of possibly increasing the amount of shop work during the summer, the course for 1891 has reached its utmost capacity for expansion or adaptability, and the time is not sufficient to give the instruction the students ought to have. It is also found that many students are unable to do the work required in the time given, because they are not physically strong enough to endure it. This was also found to be the case even with the course for two years, many students being three or four years

in accomplishing it. So, too, with regard to the present course, many students will have to take four or more years in which to complete it.

The present course is too short to enable a proper and full training in Mining Engineering to be given, especially since the students cannot be far enough advanced in mathematics during the first year, to enable them to handle the engineering branches that they should take up during the second year. Until the high schools can prepare their pupils in higher algebra and plane and spherical trigonometry, this institution cannot do its proper work with any less than two years of mathematical instruction preparatory to taking the engineering subjects. On the other hand the engineering branches require at least two years for their development. As the course is at present arranged, the instruction in many subjects cannot be completed in the time allowed, and hence other subjects are robbed of the time they ought to have. For these and many other reasons a course of study for four years is proposed, and it is hoped provision will be made for its adoption. It is proposed by the faculty as a provisional one, and the best they can adopt for the present. It is left open for discussion and criticism, as well as for modification, if circumstances shall show that it is best that it be modified. The main changes will doubtless come through advanced preparation in our high schools rather than through any change in the time here. While the proposed course greatly increases the labors of the faculty and does not apparently diminish those of the student, it really helps him to a very great degree, since it gives him much more time to assimilate and digest his work. It further places the subjects taught in proper and logical order, so that the pupil does not pass from one subject to another until he is fitted for it. Moreover, much more time can be taken to explain and elaborate each subject, so that the pupils can understand it. The four years course will also enable the practical work to be carried out in a better way and with much greater thoroughness, and will give to this institution the best, most thorough and practical course in Mining Engineering in the country. If the present Legislature will give to the school what it asks for, there would appear to be no obstacle to putting this great and necessary change into effect in two years; for no further equipment is demanded, or needed, for the four years course than the three years course must have. The new course would embrace precisely the same subjects and work as the present one, but they would be distributed over a greater length of time, and thus made more effective and complete. Two full years are needed properly to purchase and arrange the equipment now asked for, and not until the end of that time could this course go into effect.

OUTLINE OF THE COURSE OF STUDY FOR 1891-1892.

FIRST YEAR.

Fall Term—Fourteen Weeks.

MATHEMATICS—Higher Algebra, Plane and Analytical Trigonometry. Recitations seven hours a week.—Professor HAYNES.

DRAWING—Drawing Instruments and Materials, Plane Geometrical Problems, Projection, Development, Round Writing, Lectures and work in Drawing Room. Ten hours a week.—MR. ROWLAND.

PHYSICS—Elementary Mechanics, Sound, Heat, Light. Lectures, Recitations and Laboratory Work. Three hours a week.—Professor HAYNES.

CHEMISTRY—General Principles and Non-metals, Blowpipe Analysis. Lectures, Recitations and Laboratory work. Seven hours a week.—Professor KELLER.

MINERALOGY—Crystallography and Determinative Mineralogy, Lectures, Recitations and Laboratory work. Eight hours a week.—THE DIRECTOR, Drs. PATTON, HUBBARD, LANE and Mr. SEAMAN.

Winter Term—Fourteen Weeks.

MATHEMATICS—Spherical Trigonometry, Mensuration, Analytical Geometry. Recitations. Seven hours a week.—Professor HAYNES.

DRAWING—Intersection of Lines, Surfaces and Solids, Tinting, Lettering, Round Writing. Lectures and work in Drawing Room. Eight hours a week for six weeks.—Mr. ROWLAND.

DRAWING—Topographical Drawing: Making Scales, Plotting, Topographical Signs. Lectures and work in the Drawing Room. Eight hours a week for eight weeks.—Mr. DENTON and Mr. ROWLAND.

SURVEYING—Lectures and Recitations. Two hours a week.—Mr. DENTON.

PHYSICS—Light, Electricity and Magnetism. Lectures, Recitations and Laboratory work. Three hours a week.—Professor HAYNES.

CHEMISTRY—Metals, Lectures and Recitations. Two hours a week.—Professor KELLER.

MINERALOGY AND LITHOLOGY—Determinative. Lectures, Recitations and Laboratory work. Thirteen hours a week.—THE DIRECTOR, Drs. PATTON, HUBBARD, LANE and Mr. SEAMAN.

Spring Term—Six Weeks.

MATHEMATICS—Analytical Geometry. Five hours a week.—Professor HAYNES.

PHYSICS—Practical Laboratory work in Experimental Physics. Fifteen hours a week.—Professor HAYNES.

CHEMISTRY—Introduction to Qualitative Analysis. Recitations and Laboratory work. Fifteen hours a week.—Professor KELLER.

Summer Term—Eleven Weeks.

SURVEYING—Plane, Topographical and Railroad Surveying. Lectures, Recitations and practical work in the Field and Drawing Room. Thirty-five hours a week.—Mr. DENTON.

SECOND YEAR.

Fall Term—Fourteen Weeks.

MATHEMATICS—Differential and Integral Calculus. Recitations. Five hours a week.—Professor HAYNES.

DRAWING—Isometric and Cabinet Projection, Figuring, Line Shading, Construction Drawing. Lectures and work in Drawing Room. Four hours a week.—Mr. KIDWELL.

PROPERTIES OF MATERIALS—Wrought and Cast Iron, Steel, Copper, Tin Zinc, Antimony, Bismuth, Alloys, Timber and Lubricating Oils. Lectures and Recitations. Two hours a week.—Mr. ROWLAND.

CHEMISTRY—Qualitative Analysis. Recitations and Laboratory work. Fourteen hours a week.—Professor KELLER.

CHEMISTRY—Reduction and Oxidation. Recitations. One hour a week.—Mr. SHARPLESS.

METALLURGY—Fuel, Refractory Materials, Iron, Steel and Aluminum. Lectures and Recitations. Four hours a week.—Mr. SHARPLESS.

PETROGRAPHY—Optical and Microscopic Mineralogy. Lectures, Recitations and Laboratory work. Five hours a week.—Drs. LANE and PATTON.

Winter Term—Fourteen Weeks.

MATHEMATICS—Differential and Integral Calculus, Mechanics. Recitations. Five hours a week.—Professor HAYNES.

DRAWING—Machine Drawing, Tracing, Blue Printing, Making Drawings from Models. Lectures and work in Drawing Room. Three hours a week.—Mr. KIDWELL.

MECHANISM—Laws of Motion, Link work, Cams, Teeth of Wheels, Aggregate motion, Miscellaneous Problems in Applied Mechanics. Lectures and Recitations. Four hours a week.—Mr. ROWLAND.

ELECTRICITY—Electrical Instruments and Measurements, Discussion of Electro-

motive Force, Current, Quantity, Density, etc. Lectures and Recitations. Two hours a week.—Mr. KIDWELL.

CHEMISTRY—Quantitative Analysis. Lectures, Recitations, and Laboratory work. Eleven hours a week.—Professor KELLER and Mr. SHARPLESS.

MINING AND MINE SURVEYING—Lectures and Recitations. Four hours a week.—Mr. DENTON.

STRATIGRAPHICAL GEOLOGY AND PALÆONTOLOGY—Lectures and Recitations. Five hours a week.—Dr. LANE.

CHEMISTRY—Stoichiometry. Recitations. One hour a week.—Mr. SHARPLESS.

Spring Term—Six Weeks.

MINE SURVEYING AND MINING—Practical work in the Mines. Thirty-five hours a week.—Mr. DENTON.

Summer Term—Eight Weeks.

SHOPWORK—Practical work in Pattern and Machine Shops. Thirty-five hours a week.—Mr. KIDWELL and Mr. ROWLAND.

THIRD YEAR.

Fall Term—Fourteen Weeks.

DRAWING—Graphical Statics. Analysis of Roof Trusses of Various Standard Designs. Lectures and work in Drawing Room. Four hours a week.—Mr. KIDWELL.

CHEMISTRY—Quantitative Analysis. Lectures, Recitations and Laboratory work. Thirteen hours a week.—Professor KELLER and Mr. SHARPLESS.

METALLURGY—Copper and Lead. Lectures and Recitations. Two hours a week.—Mr. SHARPLESS.

ORE DRESSING—Lectures and Recitations. One hour a week.—Mr. SHARPLESS.

MECHANICS OF MATERIALS—Application of Principles of Statics to Rigid Bodies, Elasticity and Resistance of Materials, Discussion of Beams, Columns and Shafts, Combined Stresses, Testing of Materials. Lectures and Recitations. Three hours a week for seven weeks and two hours a week, seven weeks.—Mr. KIDWELL.

MECHANICAL ENGINEERING—The Steam Engine and Allied Subjects. Lectures and Recitations. Four hours a week for seven weeks and five hours a week for seven weeks.—Mr. KIDWELL.

ELECTRICAL ENGINEERING—Magnets, Electro-Magnetic Induction and Theory of the Dynamo. Lectures and Recitations. Three hours a week.—Mr. KIDWELL.

PHYSICAL GEOLOGY—Lectures and Recitations. Five hours a week.—The DIRECTOR.

Winter Term—Fourteen Weeks.

CHEMISTRY—Metallurgical Analysis: Recitations and Laboratory work. Seven hours a week.—Mr. SHARPLESS.

METALLURGY—Lead, Silver and Gold. Lectures and Recitations. Two hours a week.—Mr. SHARPLESS.

ORE DRESSING—Lectures and Recitations. One hour a week.—Mr. SHARPLESS.

MECHANICAL ENGINEERING—The Steam Engine, Steam Boilers and their details. Lectures and Recitations. Three hours a week.

MECHANICAL ENGINEERING—Engineering Appliances. Lectures on Pumps, Indicators, Gauges, Planimeters, etc. One hour a week.—Mr. ROWLAND.

MINING ENGINEERING AND MINE ACCOUNTS—Lectures and Recitations. Four hours a week.—Mr. DENTON.

HYDRAULIC AND STRUCTURAL ENGINEERING—Lectures and Recitations. Three hours a week.—Mr. DENTON.

ECONOMIC GEOLOGY—Lectures and Recitations. Five hours a week.—The DIRECTOR.

Electives.

DRAWING—Engineering Design. Floors, Trestles, Columns, Shafting, Steam Piping, etc. Lectures and work in Drawing Room. Six hours a week.—Mr. KIDWELL.

AND

ELECTRICAL ENGINEERING—Motors and their Applications, Storage Batteries, Arc and Incandescent Lamps, Wiring, Electrical Fittings, etc. Lectures and Recitations. Three hours a week.—Mr. KIDWELL.

OR

CHEMISTRY—Technical Analytical Methods. Lectures, Recitations and Laboratory work. Nine hours a week.—Professor KELLER.

Every student who is pursuing the regular course is required to select either the nine hours in Engineering Design and Electrical Engineering or the nine hours in Technical Chemistry. The selection is to be made with the consent of the instructor and submitted to the faculty for approval, at the commencement of the winter term.

Spring Term—Six Weeks.

ASSAYING—Practical work in the Laboratory with Lectures and recitations. Thirty-five hours a week, two weeks.—Mr. SHARPLESS.

ORE DRESSING—Practical work in the Stamp Mill. Thirty-five hours a week, four weeks.—Mr. SHARPLESS.

Summer Term—Six Weeks.

GEOLOGY—Practical work in the Field and Mines. Thirty-five hours a week.—The DIRECTOR and ASSISTANTS.

THESIS.

Revision of the above course will be made at any time when it is thought that it can be improved, or when the needs of the school demand it, and all the students are expected to conform to these changes whenever introduced.

DEGREES.

In 1888, it was found that the act for the organization of the Mining School did not empower the institution to confer any degree upon its graduating class at that time. This was amended by the Legislature of 1889, and the school allowed to confer the degrees customary in such institutions.

Under the two years course the degree of Bachelor of Science was conferred on all persons graduating in that course; while all that take the three years course receive the degree of Mining Engineer.

If the four years course goes into effect, it becomes a matter for serious consideration whether the Mining School should give a degree of a lower order, like Bachelor of Science, or Bachelor of Mining Engineering, at the end of the first three years, or not. If such a degree were given, persons who lacked the means of pursuing the full course would be enabled to graduate with a lower degree, and still be qualified in many branches of mining to do the work required of them. This is a point that needs careful consideration in the future. Would the effect be to lower the work in mining engineering, and would the fact that it might aid young men without means, offset the prospective injury to the reputation of the school and of its regular graduates? Careful, thorough consideration of the matter in all its bearings is needed.

BUILDINGS AND GROUNDS.

In 1886, the Mining School rented for its purposes the upper floor and a portion of the basement of the engine house of the village of Houghton. This gave one large room for general school purposes, and one small room that could be used as a chemical laboratory, and which would accommodate some ten or twelve students. Adjoining these rooms were two small ones that would answer for a balance-room and rooms for the instructors. The basement was used for storage and as an assay laboratory. There were no rooms that could be used for lecture or recitation purposes, except the above mentioned ones.

In September, 1887, it was found necessary to rent other rooms to accommodate the increased instruction. This was done by taking four connecting rooms in the Oddfellow's building, a block away from the engine house, which could be used for mathematics, drawing and engineering. The main room in the engine house was then fitted up to hold the chemical apparatus and to accommodate the work in mineralogy, lithology and geology, as well as for general use as a recitation and lecture room. It was found that these accommodations were not sufficient for the needs of the school, and in the summer of 1888 the large rink building was rented, retaining rooms in the engine house, but vacating those in the Oddfellow's block. This was a distinct gain not only in room but also in accommodations, since the two buildings were only separated by a street. The rooms in the engine house were entirely given up to the chemical department, and fitted up for its uses, while the rink building was temporarily partitioned so as to accommodate the mineralogical and geological work, and also the drawing. Part was taken for storage and as a gymnasium for the students.

An extra room in the basement was furnished with temporary blackboards, and used for mathematical and engineering purposes.

Meanwhile the Legislature of 1887, had made an appropriation for a building, and land was donated by Hon. J. A. Hubbell on which it could be erected. A portion of an adjoining lot, which was not controlled by Mr. Hubbell was purchased, in order to insure sufficient space in one direction. Under the act making the appropriation for the building, contracts were let and work commenced in 1888. The appropriation made for the building was too small to give one of the size that an engineering school should have. It could not be made to contain the laboratories and workshops needed. It is well known to all that shop and laboratory work require more room than recitation or lecture work does, and therefore the space needed in a school of practical work is much more than that necessary in a school in which theoretical education is the only end sought. The insufficient appropriation in 1887 was a serious mistake, since the school has never been able to undertake the instruction the law of its organization contemplated it should do. It can never do this unless appropriations are made to give the additional room necessary which the present Legislature are now asked to do in providing for a metallurgical laboratory.

In planning the interior of the building every effort was made to economize the space for recitation rooms and laboratories and reduce the halls to a minimum.

The main building is 109 feet by 53 feet, with a wing 37 feet by 25 feet.

The basement floor is used for the boiler room, weighing room, machine and workshops, and assaying laboratory. The first floor contains the Director's room, reading room, library and laboratories of general and economic geology, petrography and mineralogy. On the second floor are situated the mathematical recitation rooms, together with the laboratories for physics, mechanical drawing, surveying and mining engineering. The third floor is devoted to the chemical laboratories, chemical lecture room, chemical supply room, balance room, etc.

Because the main building was of insufficient size to supply the necessities of the school, a wooden building was erected in 1890 to accommodate the stamp mill and other ore dressing machinery. This building will be used for the first time the coming spring for laboratory and practical instruction, but it affords only a partial relief.

In the spring and summer of 1889, the furniture and apparatus belonging to the school were moved from the engine house and rink building and placed in the Mining School building, it being sufficiently complete for that purpose. It is to be remembered that the appropriation bill for furnishing the school-building did not pass until June, therefore all that could be used for instruction at that time were the materials and equipment formerly employed in the other buildings and which were inadequate to the needs of the school, except such portions of the equipment as the director could purchase on his own responsibility. As soon as the appropriation bills had passed, the work of furnishing the building was undertaken, contracts let, and every effort made to have it properly equipped in September, 1889, when the fall term opened. As every contractor failed to keep his contract in time, it was found necessary to carry on the regular school exercises with from one to five different gangs of workmen employed about the building. The worst was over by the end of the Christmas vacation, but the building was by no means furnished until well into the summer of 1890. The circumstances under which the school had to work during the year 1889-90 were of the most trying kind, yet the year will compare favorably with any year preceding, in the character and amount of work done.

From the above sketch it will be seen that not until September, 1890, has the school had buildings, furniture or apparatus at all adequate to the demands made upon it. Even then there were serious deficiencies which the present appropriations asked for are intended to supply.

EQUIPMENT.

A large part of the funds given by the Legislature of 1889, for equipment, had to be used upon the cases to contain specimens, the specimens themselves, and the machinery and apparatus for laboratory work and instruction. Every effort that could be made was put forth in the interests of economy, and when the conditions are considered under which the school has been working, it will be found that comparatively few mistakes have been made, and these have arisen mainly through a change in plans, which circumstances render necessary.

The Physical Laboratory has not yet been equipped as was expected it would be, when the last catalogue of the school was issued, owing to a lack of funds and to a change of instructors in that department. The apparatus already procured is in part adapted to lecture purposes, and in part to laboratory work. In this department the tables have been fitted for

use, and in the main it only remains to provide the necessary lecture and laboratory apparatus, suitable for classes of the size of the present first year class.

The drawing room has been fitted with tables and shelves but needs models, blue print apparatus, etc.

The metal working and pattern shops were fitted in accordance with the views of the instructor formerly in charge of them, and adapted to the size of the classes that were then present, which leaves them inadequate to accommodate the present first year class. The shops contain a Riehle testing machine, a drill press, engine lathe, planer, shaper, hand and power lathes, band and jig saws, forge, grinding and polishing machinery, etc. In the line of electrical apparatus but little has been obtained besides an Edison dynamo and Sprague motor.

In the surveying and mining engineering work a complete set of levels, transits, rods, etc., for surface and underground surveying, have been provided. The present difficulty is, that while the equipment was ample for preceding classes, it is altogether too small for the class that is to make use of it during the coming summer.

In mining engineering there is a lack of models for instruction, and the same can be said of the hydraulics and structural engineering.

In chemistry the laboratories are well equipped with the means of working in general and analytical chemistry, except in the case of special pieces needed in the technical or analytical work. The lecture apparatus in this department is also very deficient, and each of these wants should be supplied. The aim has been to make the laboratory appliances and conveniences as complete as our means allowed. The laboratories, lecture, balance and supply rooms are all on the same floor. The laboratories are furnished with large fume chambers, which have a good draught, and are supplied with hot plates, and sand and steam baths. The tables are furnished with sinks—one for each pair of students—and have abundant gas and water supplies. Filter pumps are arranged at each sink, so as to provide a pump for each student.

The assay laboratory contains ten large crucible furnaces and eighteen muffle furnaces of the Brown pattern, and sixteen crucible and muffle gasoline furnaces (Hoskins), the intention being to provide a muffle for each student and thus avoid the inconvenience and waste of time in making one furnace do for two or more persons. The laboratory has also a Blake and Gates crusher, laboratory size, to be run by power, three large buck plates, large and small mortars, and sets of sieves. The weighing room is supplied with six pulp scales and five button balances, of Troemner's and Becker's make for use in this department.

The ore dressing laboratory, or stamp mill, is equipped with an assortment of modern crushing, sizing and sorting machines, and is well prepared to treat free-milling and refractory ores by such methods as analysis and mill tests show will give the best results. Students are required to care for the machinery, carry out the dressing operations, and check their results by fire assay. The apparatus at the disposal of a student at present consists of the following pieces: One 650 pound three stamp battery, for wet or dry crushing, furnished with copper plates; one Blake crusher; one Gates crusher; one sample grinder; one pair of rolls; one amalgamating pan; one settler; two jigs; one Calumet separator; one spitzkasten; one Frue vanner; apron tables; screens; precipitating tanks; and settling tanks sufficient to enable the student to check all his results by assay.

This laboratory wants some additional pieces of machinery, to render the equipment as complete as the school needs for its instruction.

In metallurgy there is nothing except samples of various grades of iron, etc. This department needs a separate building and thorough equipment and an appropriation is asked for to supply this need.

In crystallography the laboratory is well supplied with about 1,100 glass and wooden crystal models for teaching purposes, and also has most of the goniometers and other appliances needed, unless further instruction should be given than is given at present. The chief need is for duplicate wooden models, that can be used for recitation and laboratory practice.

The mineralogical laboratory is equipped with cases, tables, fume chamber, gas and some 26,000 mineral specimens for lecture and laboratory work. The chief need is to make good the wear and tear of a laboratory class of some 40 men, who are working upon the subject this year, to add specimens of minerals in certain points where the collection is weak and insufficient to give the instruction required. In optical mineralogy two polariscopes have been provided, with about 150 sections of minerals suitable for use with them. This collection should be increased.

In lithology about 10,000 specimens have been procured, making a very good basis for instruction in that department, but further specimens are needed to fill out some gaps. In connection with this and the petrographical department, thin sections of the rocks of the collection are needed for purposes of study and teaching.

In the petrographical department there have been provided twenty petrographical microscopes of the best makes (constructed for the school with special improvements), with the Bertrand lens insertible in the draw-tube, and with mica and gypsum plates and quartz wedges, that will be used by the students in putting their instruction into practice. Several finer microscopes of various makes, American, German, French and English, are subject to the student's inspection. There is also one set of the more delicate, or less important, accessories, i. e., axial angle attachments, Babinet's compensator, Leeson's goniometer, Bertrand's and Calderon's eyepieces. Abbe's spectroscope ocular, Bertrand's goniometer attachment, his arrangements for measuring the index of refraction by total reflection and various special objectives and eyepieces. These as well as Jannettaz's thermal apparatus. Groth's "Universal-Apparat," Wollaston's, Hirschwald's, Fuess's and other goniometers, the total reflectometer, polariscopes, and a pyro-electric duster are for illustration and advance work. A considerable addition is needed for this department in order to give the instruction promised to the present first year class, and it should be provided at once.

The collections in palæontology answer most of the needs in that direction here, although some gaps remain to be filled, and more duplicate fossils are needed for laboratory work and instruction.

In the department of physical and economic geology, particularly in the latter, the collections are deficient, and special appropriations have been asked for, to aid in supplying the deficiencies.

GIFTS TO THE MINING SCHOOL.

One of the earliest and most important benefactions to the institution was the gift of the main portion of the land that now belongs to the school given by the Hon. Jay A. Hubbell in 1885.

The library of the Houghton county Historical Society and Mining Institute was also given to the Mining School, through the instrumentality of Mr. J. B. Sturgis and now forms a valuable part of the school library. The library has been still further increased by donations of books by Messrs. John Dickinson, T. L. Chadbourne, J. M. Longyear and others.

Valuable collections of specimens have been given the Mining School by agent D. H. Bacon formerly of the Cleveland mine, and by the will of Agent B. F. Emerson late of the Copper Falls mine. Valuable specimens have also been presented by Captain Hoatson, of the Calumet and Hecla mine, and by many others, particularly by Agent A. Kidder of the Champion and Lake Angeline mines, by whom large amounts of material have been sent. A recent valuable donation has been made by Captain P. M. Mitchell, of ores of the copper and nickel mine of Sudbury, Canada.

A Gates Laboratory Ore Crusher has been presented to the school by the Gates Company, through the instrumentality of the late David M. Ford, their agent in this district.

Important and valuable material for the library has been received from the United States Government, and also from the Government of the State of Michigan, through the instrumentality of Senators Stockbridge and McMillan, Representative Stephenson and Ex-Governor C. G. Luce.

An important aid in furnishing the ore dressing laboratory, or stamp mill, was rendered by Supt. F. G. Coggin, in giving his royalty on the Calumet Separator.

In all institutions for education there are many young men that have good capacity and ability, but are financially unable to pay for their education unless some assistance is rendered them.

In most of the colleges this aid takes the form of scholarships, which are given to a certain class of pupils that need them although, to some extent, money is loaned to those that need it. Both methods have been started in this institution, and apparently will be productive of much good.

The first scholarship established was the Charles E. Wright Scholarship, given by Mrs. Carrie A. Wright, in memory of a late member of the Board of Control. Mrs. Wright's letter is given below.

TO THE HONORABLE BOARD OF CONTROL OF THE MICHIGAN MINING SCHOOL:

Gentlemen—In memory of my husband the late Charles E. Wright, and as a token of the deep interest he had in the Michigan Mining School, I desire to give to said school the sum of one thousand dollars.

If said gift shall be accepted, it is to be held under the following conditions, to wit: It is to be invested as a permanent fund by the Board of Control, to form the nucleus of a scholarship to be known as the Charles E. Wright scholarship. The income is to be given to some indigent student by a vote of the Board of Control, with the advice and consent of the Faculty of said school.

The award is to be made during the first term of the year to some student who has a satisfactory record during the entire preceding year in the Michigan Mining School, and who intends to devote himself to the profession of Mining Engineering or Geological work. The income is to be divided into three equal parts, to be paid during the three terms of the year, and if at any time the conduct or standing of the student receiving the award should become unsatisfactory, the portion then remaining unpaid should be withheld from him, and given to some other student, in accordance with the terms of this gift.

[Signed]

CARRIE A. WRIGHT.

The money has been paid over and invested, but, unfortunately, thus far no income has been received from it.

A further fund was given by Mr. A. Lanfear Norrie, to form the basis

of a dormitory fund and scholarship. From information received, it is probable that the income from this scholarship can be awarded in 1891, in accordance with the terms given below:

Know all men by these presents, That I, A. Lanfear Norrie, of the city of New York, hereby give, grant, assign and set over unto the Michigan Mining School, at Houghton, Michigan, and to Peter White, D. H. Ball and J. M. Longyear of Marquette, Michigan, as trustees the sum of five thousand dollars, lawful money of the United States.

The conditions of this gift, and upon which this fund is to be taken, are, that the said trustees shall invest the same upon bond and mortgage in the village of Marquette, or of the city of Detroit, in the State of Michigan; or in the city of Milwaukee, in the State of Wisconsin; or in the city of Chicago, in the State of Illinois, upon unencumbered improved real estate.

That one-half of the income of said sum of \$5,000 shall be paid yearly by the said trustees unto the Board of Control for the support of some student whose father has worked in, or in some way been connected with, mining operations in the Upper Peninsula of Michigan, who shall be designated by the faculty of said school; and the remainder of said income shall be accumulated and invested as said principal shall be invested, and that this fund with its accumulations shall be the basis of a larger fund to be obtained from other contributors amounting to at least \$100,000, to be used for the erection of a dormitory building for the use of such students as may be designated by the said faculty, which building when erected, shall be under the exclusive control of the corporation or Board of Control of the said Michigan Mining School.

This gift is to the said trustees and their successors forever, for the benefit of the said Mining School. In case of the death of either of the said trustees, the survivors or survivor shall appoint a successor or successors.

When the erection of the said building shall be commenced, after the said fund of \$100,000 is obtained, the sum hereby given, with all its accumulations, shall be paid over to the said Mining School, for the purposes aforesaid.

Witness my hand, the 30th day of January, 1890.

A. LANFEAR NORRIE.

Witness T. E. O. M. STETSON.

We, Peter White, D. H. Ball and J. M. Longyear, the persons named in the above instrument, accept the trust therein granted in all respects, and agree to comply with the conditions thereof.

Witness our hands, the 1st day of February, 1890.

PETER WHITE,
D. H. BALL,
J. M. LONGYEAR.

In another direction a fund of \$500 for the present year has been given by Mr. J. M. Longyear, of the Board of Control, to be the property of the Mining School and to be loaned to students of said school, that may be designated by the Treasurer and Director, said students being unable to maintain their connection with the school without such aid. This money is not to be a gift to the student, but he is to pay it back as soon as practicable after graduation. After his graduation interest will be charged him for the first three years at five per cent, and for the following two years at seven per cent. The money repaid and the interest are to go to the fund, to aid other students in the same way. This method, it is believed will lead the student to a more manly feeling than a gift outright would produce in him, since it gives him the means of paying for his own education, assists him when he most needs assistance, and enables him to return the money to aid others, at a time when he can best do so. It is believed that it would be better if all funds given to the school for investment and use, should be accompanied by some proviso that a certain portion, at least, of the income shall be repaid or set aside, to increase the principal until it shall attain a limit either fixed or left to the proper authorities to determine. Such a method would enable the institution in

the future to do much more good, than it could if the income were to be spent entirely each year.

THE LONGYEAR PRIZES.

Another step taken by Mr. J. M. Longyear to aid the school, was the establishment of the Longyear prizes under the following conditions:

Marquette, Michigan, Nov 9, 1887.

CHARLES E. WRIGHT, Esq., MARQUETTE:

DEAR SIR—I wish to offer three first prizes of seventy-five dollars [\$75] each, and three second prizes of fifty dollars each, [\$50] to be competed for by the members of the senior class of the Michigan Mining School. The competition to be by means of papers on three subjects, written by members of the class and submitted to the Board of Control for examination in such manner and at such time as the Board may determine. I desire subjects selected with a view of producing papers which will be of practical use in developing the mineral resources of the State of Michigan. I should like something that would be of service to the average woodsman or explorer, and suggest the subjects of practical field geology, and the use of the dial and the dip compass in explorations, leaving the selection of the third subject to the judgment of the Board. If this offer is accepted and there are two or more papers on each subject submitted, I will pay seventy-five dollars to each of the writers of the three papers which may be awarded the first prizes, and fifty dollars to each of the writers of the three papers which may be awarded the second prizes.

I would suggest, however, that in case only two papers are submitted, that the Board reserve the right of awarding only one prize, in case such action should seem advisable. In case only one paper should be submitted, I should like the Board to exercise its judgment in awarding a prize. It is my desire to publish the papers under the writers' names, in pamphlet form, for distribution among miners, explorers, land owners and others.

Yours very truly,

J. M. LONGYEAR.

In conformity to the above letter the Board of Control have decided upon the following subjects and conditions:

SUBJECTS.

1. Field Geology; its methods and their applications.
2. The Dial and the Dip Compass and their uses.
3. The Diamond Drill and its uses.

CONDITIONS.

The conditions under which the prizes are to be awarded are as follows:
The papers for this year are to be presented by September 30, 1891.

A student may present a paper upon each of the three subjects, which will entitle him to the three prizes, if his papers are found worthy.

The dissertations must be written in a clear, legible hand, or type-written, on letter paper, quarto size. The sheets are to be securely fastened together, written on one side only, and a margin of not less than one inch left all around, in order that the dissertation may be bound if desired.

The title page is to have upon it an assumed name, and each dissertation is to be accompanied by a sealed envelope bearing the same name. This envelope must contain the writer's true as well as assumed name, and address, and it will not be opened until the awards have been made.

No prizes will be awarded unless the papers are judged to be of a suffi-

ciently high standing to be entitled to a prize, hence there may be awarded all, part or none of the prizes, as the case may be.

These prizes can now be competed for by any student of the school, whether special or regular, without restriction to the graduating class, as was originally specified.

One difficulty in the way of the preparation of the papers required, is that the students have had all they could do properly to obtain their degrees, without taking much time for other objects. With additional students, and with more that have had a collegiate or university training, this difficulty will disappear. Another difficulty has been the nature of the subjects, and their advanced character. This might perhaps be remedied by allowing a greater range of subjects, or by allowing the writers more freedom in the choice of a subject.

It is to be hoped, that the habits of the more eastern portions of the country may be more fully followed, in reference to the building up of this institution, for in no way can one better erect for himself a monument whose influence shall be wide spread and enduring, than by raising that monument on the basis of an educational institution, especially since every interest conspires to keep and preserve it.

Great good can be done by endowments for professorships, for the library, for buildings, for any and all purposes needed about an institution of this character. A special need is for proper accommodations for the students, and an excellent and judicious act would be the erection of a gymnasium with accompanying conveniences, since, owing to the deep snow and long winters of this region, there is less opportunity for out of door exercises, than exist in the portions of the State farther south. A building of this kind would be appreciated both by students and Faculty.

LIBRARY AND READING ROOM.

The library and reading room have been under the special charge of the Director, who has looked after all orders for both. This has been necessary owing to the inexperience of the librarian in such work, at the time of his appointment here.

During the past winter the librarian spent several weeks at the Public Library and the Newberry Library of Chicago, in studying the methods of cataloguing and care of libraries, preparatory to arranging the books and completing the catalogue of the Mining School Library. But little work has been done on the cataloguing, and nothing on the shelf marking, of the books, because the time of the librarian has been fully occupied with his duties as clerk of the school. During the coming summer it is expected that a good deal will be accomplished, in the arrangement of the books and formation of the catalogue. The library contains now 6,843 volumes and several thousand pamphlets, which form the nucleus of a fairly good working library. The greatest need in the library is that of complete sets of the various technical and scientific journals and proceedings. In this respect the library, as a whole, is very weak. It is important that these deficiencies be supplied at once, in order that the school may have the means of giving the instruction that the students need. The library is the right hand of every live teacher in any department, and only by its constant use can they do the work they ought to do.

The reading room is well supplied with the important technical and scientific periodicals, although some important ones are still wanting. This

room is an essential adjunct of the library and the school, as it enables the teachers to keep pace with the advance in their respective departments. With the larger number of advanced students, and with the completion of the equipment of the institution, the use of the library will rapidly increase, especially during the next two years. This will naturally be the case, because the instructors will not be forced to give so much time to the organization and equipment of their departments as they have given in the past, but will be able to devote their energies more fully to the development of their courses of instruction; and for this purpose a good library is as essential to every teacher, in every department of this school as are the laboratories and workshops.

M. E. WADSWORTH,
Director.

SUMMARY OF RECEIPTS AND DISBURSEMENTS SINCE THE ORGANIZATION OF THE SCHOOL IN 1885.

There have been appropriated by and received from the State the following amounts:

Current expenses, 1885.....	\$25,000 00
1887.....	17,500 00
1889.....	44,000 00
Total.....	\$86,500 00
Building fund, Act 239, 1887.....	75,000 00
Fitting and furnishing, Act 136, 1889.....	60,000 00
In addition to which there has been paid in by students, over and above the amounts charged to them for materials, etc. (this balance representing deposits for the current school year against which the charges will be made at the close of the year).....	1,078 51
Total.....	\$222,578 51

Which amount has been expended as follows:

For property now on hand,	
Buildings.....	\$73,535 12
Fitting and furnishing.....	48,353 83
Equipments.....	8,678 96
Supplies, amount expended, less amount charged to students.....	191 29
Library.....	4,425 51
Laboratory and assay department.....	6,455 70
Real Estate.....	1,250 00
Mechanical laboratory.....	1,400 39
Geological department.....	120 75
Total property assets.....	\$144,411 55

Disbursed for running expenses,	
In 1886 and 1887.....	\$15,358 18
In 1888.....	10,968 30
In 1889.....	15,339 09
In 1890.....	18,387 25
Total running expenses.....	60,052 82

Total amount expended..... 204,464 37

Balance cash on hand, all funds, Dec. 31, 1890..... \$18,114 14

SUMMARY.

Total received from all sources as above.....		\$222,578 51
Total property assets.....	\$144,411 55	
Total cash assets.....	18,114 14	
Total expended for running expenses.....	60,052 82	
	<u>\$222,578 51</u>	<u>\$222,578 51</u>

The last summary above given is, in condensed form, the trial balance from the books of account of the school, as it appears January 1, 1891.

STATEMENT OF AMOUNTS APPROPRIATED.

For the purpose of carrying out the provisions of the act establishing the School. Session of 1885.....	\$25,000 00
For the maintenance of the Mining School for the year 1888. Session of 1887.....	17,500 00
For the support and maintenance of the Mining School, of which sum one-half shall be used during the year 1889, and the remainder during 1890, for that purpose. Session of 1889.....	44,000 00
Total of annual appropriations.....	86,500 00
For the purpose of erecting and equipping a suitable building, including all permanent fixtures, heating and lighting apparatus, etc. Session of 1887.....	75,000 00
For the purpose of fitting up and furnishing the new school building, equipping the same with a library, technical apparatus, implements and machinery, and for preparing and fencing the grounds, and storing and bringing to the same a supply of water, and for such other similar purposes as may be found necessary by the Board of Control. Session of 1889.....	60,000 00
Total of permanent appropriations.....	135,000 00
Total appropriations.....	221,500 00

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction*:

SIR—The majority of the State Board of Visitors to the Michigan Mining School visited that institution in June. We found the school occupying its new building situated in the city of Houghton in the midst of the largest copper mines in the world, and near the iron mines of Marquette, Menominee and Gogebic. The great advantages of this school being located in this region is apparent to every one. The building is a magnificent one, plain, well built of Portage Entry sandstone, commodious and well adapted in every way to the work of the school. It is well equipped in the line of its work by extensive and valuable collections in geology, as embraced under its various departments of mineralogy, crystallography, petrography, etc. Surveying, mining, engineering, mathematics, metallurgy, chemistry and assaying are in charge of competent men and with the valuable helps in the shape of laboratories, instruments and library, the students can find no obstacle to thorough work.

The machine shop is fitted up with fine machinery with power to run it, so that the student becomes familiar with the design and construction of machinery, its power, its management and its use.

An Edison dynamo has been placed in the stamp mill to furnish light to the entire plant and power for the smaller machinery.

At the time of our visit the class in field geology was pursuing its line of study and observation work in the vicinity of Marquette. We spent two half days with the class and were fully impressed with the importance and practicability of the work. To complete that line of study the student must fully know the scientific reading of all the signs which he encounters in the rocks before him. This class was under the leadership of the Director of the school, Dr. M. E. Wadsworth, and the boys found that their leader was a man of great endurance as well as a teacher who understands his profession.

Michigan needs this school, the young men need its instruction and the mining interests need the trained young men as experts in the mines. There will be more and more demand for these skilled men as the vast mineral resources of our State are more developed.

We believe that the plan of electing the Director of the Mining School, State Geologist, and locating the office of the geological survey at the Mining School has been wise, as the two mutually help each other.

No other place in the State is so well adapted for preserving the specimens of the survey, and nowhere can such skilled assistants for the survey be so easily secured as at the Mining School.

The faculty for the ensuing school year are men of known ability as investigators and original thinkers and writers, and we feel certain that the efficiency of the work of the school has been greatly strengthened by some changes in the teaching force.

The Board of Control is composed of practical men, largely connected with the mining interests of our State, and their organization and management of the school has been done wisely and well.

We most earnestly indorse this school and its location, and regret exceedingly that it is not more fully known to the young men of southern Michigan, that more of them when choosing a life work might secure the advantages of this school and its environments. We trust that in the near future the fondest hopes of those practical men who founded this great school may be realized.

J. M. BALLOU,
J. W. SIMMONS,
Visitors.

Otsego, Sept. 19, 1890.

ADRIAN COLLEGE.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—All the members of your committee in company visited Adrian College, two of us attending the exercises of some of the literary societies, occurring on the evening of May 14, and all of us spending the following day visiting the various departments and witnessing the work in the classes.

We visited the laboratories for work in physics and chemistry, the library and the museum. We also visited the Ladies' Hall, and were highly gratified with its order and general management.

We are pleased to report that we found an able and earnest faculty, thoroughly devoted to their work, and managing with efficiency and wisdom the interests confided to their care.

The students, as far as we could observe and learn, were obedient to the wholesome discipline of the College, and deeply interested in their part of the work.

We found the instruction thorough, and an excellent spirit pervading the College.

Very respectfully submitted,

S. D. BARR,
FRANCES STEWART MOSHER,
W. C. HEWITT,
Board of Visitors.

ALBION COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

SIR—I have the honor herewith to submit the following report of the condition and work of Albion College for the year ending June 26, 1890.

There has been a larger attendance of students than during any preceding year. The growth is especially gratifying in the College of Liberal Arts. The number reached 121. The attendance in all the departments aggregated 498. This number is divided between the College of Liberal Arts, Preparatory School, Conservatory of Music, School of Painting and Commercial Department.

The bachelor's degree was conferred on nineteen young men and women. Eight graduated from the Conservatory of Music, four from the School of Painting, and ten from the Commercial College, making forty-one in all. The master's degree was granted to four persons who had completed prescribed post graduate work.

The courses of study have undergone but few changes. The most important modification consisting in the removal of beginning French from the Preparatory School to the freshman year. The work in biology has been specially emphasized.

PREPARATION FOR COLLEGE.

The preparatory courses cover four years of time. All these courses look forward to a degree, and are intended to prepare the student, according to his option, for the regular college work which on completion will entitle him to the degree of A. B., Ph. B., B. S., or B. L., depending on the lines of work pursued.

TERMS OF ADMISSION.

Candidates for admission into the Preparatory School must be at least thirteen years of age, and have a knowledge of the primary branches, including descriptive geography, mental arithmetic, written arithmetic through fractions, and some knowledge of English grammar. Starting with this preparation, those who are studious will be able to complete the course prescribed in four years, so as at that time to enter the freshman class. For advanced standing the age should be correspondingly greater, and examination must be passed on that part of the course for which credit is given, or on work equivalent thereto, unless certificates are brought for

the same from accredited schools. The object of this school is to provide young people who desire to fit themselves for college with the most complete advantages for such preparation. It is not simply an academic department, but is conducted in the interest of those who intend to pursue studies required for admission into college.

Being convinced that a large number of schools of twelve grades in the quality and extent of work done may be trusted to prepare for the freshman year in college, and that many of the schools of eleven grades may be relied upon to fit the pupil for the fourth or highest preparatory year, we have made the following

ANNOUNCEMENT.

1. Under conditions hereinafter mentioned, we accept without examination of students, the work of the best high schools of twelve grades, as preparation for college. We accept the completed work of the English course as sufficient to admit the student into the freshman class in our letters course, on graduation from which he will receive the degree of bachelor of letters. If the course he has pursued be more strictly scientific, he will, in the same way, be admitted into our scientific course, for which the degree on graduation is bachelor of science. If the course studied was largely made up of Latin, or Latin and Greek, he will, in like manner, be admitted into college in the Latin scientific, or classical courses, which will prepare him, in the former course, for the degree of bachelor of philosophy, and in the latter for bachelor of arts. Under the same conditions we admit into our fourth preparatory year from schools of eleven grades which are known to be doing satisfactory work.

2. The regulations contained in the preceding paragraph apply to all schools which

(a) Have been visited by the Faculty of the University of Michigan and approved by them; or

(b) Have been visited by us and approved; or

(c) Have by some other satisfactory method, supplied us with the evidence that, in extent, quality and completeness of work, the pupil has gained the scholarship and culture required to enter our classes. If the school has received formal approval according to (a) or (b) of this paragraph, we admit students directly on their diplomas and certificates. But if the school is not included in one of these classes, and it is desired to enter into relations with Albion College, the course or courses of study must be transmitted to us with such statements in regard to the work done as are considered important. This will be preliminary to an adjustment of relations. We, at an early day, give information as to our judgment of the curriculum followed in such school.

3. To be admitted into the college without examination, the student, if coming from a school included in one of the classes of 2, (a) or (b), will present his diploma or certificate, together with a letter from the superintendent or principal of the school informing us that his work has been thoroughly done, that his habits are studious, and that he possesses capacity for genuine scholarship. On the strength of this he will be immediately classified. If he comes from a school embraced in class 2 (c) he must present his diploma or school certificate with a letter from the superintendent or principal of the school certifying to the earnestness and success of his work. He is then classified provisionally according to the tenor

of these documents, which classification is made permanent after a few weeks' successful study in the institution.

I will not take up the room in your annual report required to print our tabulated courses of study. We shall be glad to send the College Year Book to any persons desiring to examine the same. I will simply furnish some general statements in regard to these courses.

COLLEGE OF LIBERAL ARTS. REQUIREMENTS FOR ADMISSION.

Candidates for admission to the freshman class must be at least sixteen years old, must pass examination in the primary English branches, and in all the studies of the preparatory course, or studies equivalent thereto, as taught in the high schools, unless admitted on diploma or certificate from other schools under conditions elsewhere stated.

Candidates for advanced standing must, in addition to the foregoing, pass examination on advanced studies, for which credit is sought, unless coming from other colleges whose work is accepted by us. Persons not candidates for a degree will be admitted to the regular classes, but will be charged the matriculation fee, when their scholarship would entitle them to admission into the freshman class.

SPECIAL FEATURES OF WORK DONE.

Some very important changes have recently been made in the curriculum of studies: The system of college work is made to conform to the most advanced views of leading teachers, and is brought into harmony with the natural and necessary order of mental growth—both individual development and race civilization. A few words only are needed in this place.

By the time the student reaches the beginning of the junior year he is regarded as prepared for more independent work than he could generally carry forward in the earlier part of his course. Henceforth his individual preferences are more largely consulted. It will be seen that lines of study and investigation are provided from which he may select the branches to be pursued. We invite attention to the following points:

1. A few studies are elective previous to the junior year.
2. All studies in the junior and senior years are elective with the exception of psychology, logic and one term of chemistry.
3. Students in these years must select from at least two lines.
4. It is recommended that they select from three lines—they must not select from more than five lines. These selections will be made under the advice of the faculty, so that consistency of work may be secured.
5. It is the judgment of the Faculty that the best results are gained when the student has done very thorough work in all the studies previous to the junior year—not slighting any—but does not attempt to take up all the lines of elective work in the last two years of his course. There is benefit from specialization, and by the time the student reaches the junior year, the attention should be concentrated on a comparatively small number of subjects. But in order to do special and research work profitably it is necessary that thorough discipline of mind shall have been gained.
6. The student is required to have fifteen hours of recitation each week, or what is equivalent thereto.
7. A large amount of research work is prosecuted during the junior and senior years.

8. The degree conferred at graduation is determined by the course pursued up to the close of the sophomore year, in all courses except the Letters. If, previous to that time the student has taken the studies of the classical course, his degree will be "bachelor of arts;" if Latin Scientific, it will be "bachelor of philosophy;" if Scientific, it will be "bachelor of science." The junior and senior studies are largely of a university character, preparing the student for independent investigation when, from graduation, he must carry forward his studies without the presence and guidance of a living teacher. The lines of study provided have been made so broad and varied that the candidate for any of the professions, as well as the business man, can obtain here the scholarship which will best fit him for his chosen and anticipated mode of life.

It will seem that the order in which some of the branches of study are pursued is not quite the same as that adopted in many institutions, but no confusion grows out of this arrangement, as all the studies are taught in contiguous years. Those who have pursued Latin and Greek before any of the modern languages find no inconvenience in taking up these modern languages at any point in their course. Whatever may have been the order of study in the high schools, the classification will depend on the amount and value of the work done, not on the fact of pursuing the precise branches laid down in our preparatory school.

ANALYSIS OF COLLEGE AND PREPARATORY WORK.

1. The extent of study to prepare for college is the same in all the courses. The degree to be gained is not thus lowered by being granted after a short course in any line of work.

2. The first year is given purely to English studies. It is believed this will be for the best interest of students who as yet have reached no higher grade of scholarship. The gaining, in connection with other branches, a thorough knowledge of English grammar will lay a good foundation for the study of the languages which immediately follows.

3. We begin linguistic studies with the German. Former reports contain in full reasons for taking up modern before ancient languages, and it is probably not necessary to repeat them here. It is enough to say that the student finds fewer difficulties in mastering a modern language than an ancient language, and hence as the more simple it should precede the more complex. Also modern languages open access to the valuable living literature of the learned nations of Europe, and it is important that the student possess the key to this storehouse of learning early in his course.

4. The study of the French has been postponed till the freshman year, because the graduates of high schools, generally, have not had an opportunity of pursuing this branch in making their preparation for college. We should give it an earlier place, were it not that we desire to accommodate the pupils who come to us from schools in this and other states.

5. Placing German in the order of study before Latin allows us only two years for the latter study in the preparatory school. This does not reduce the amount of Latin provided, but transfers it, to some extent, to the college years. In the Classical and Latin Scientific courses, Latin is required through the freshman and sophomore years, and is made elective through the junior and senior years, so that there is provision for Latin

through the entire four college years. A corresponding change is made with the Greek.

6. The fact that in some cases the order of work in our preparatory school is not the same as in many of the high schools, does not introduce any disorder into our movements, because back work can be taken up with classes in the institution pursuing such branches.

7. Classification of students coming from high schools or academies, does not depend on the fact of having pursued just the branches laid down in our preparatory courses, but credit is given for equivalents so far as they harmonize with the lines of movement.

8. The Letters course is provided for young people who desire to devote as much time to study as is necessary to complete any of the ordinary college courses, but being specially interested in the science of music, other lines of the fine arts, etc., would like to gain the form of culture to be acquired in such studies. A limited election of these branches is therefore allowed for the degree of bachelor of letters.

ACADEMIC DEPARTMENT.

This department is provided for students who do not wish to classify in the preparatory school or college.

It accommodates two classes of persons:

(1) Those who do not propose to pursue an extended course, intending to spend only a short time in the institution.

(2) Students who desire to make a specialty of certain lines of work, such as mathematics or science or history, etc.

There are the same requirements for admission as to age and scholarship as in the preparatory school. Any of the classes of the Institution are open to academic students without reference to the tabulated order, in view of the fact that they are not candidates for a degree, provided the scholarship already gained will enable them to carry forward the work successfully. No tuition is charged, but in addition to the regular incidental fee the matriculation fee of five dollars must be paid if college studies are pursued. We consider it best for the student to take up the work in the order of our tabulated courses, and all the work thus provided, but as circumstances sometimes exist to prevent this we make provision, as above stated, for limited lines of study.

CONSERVATORY OF MUSIC.

The attendance of students in this Department the past year was very large. The total number was 186. Of these 64 pursued literary studies with music. Of the 186, the greater part—158—were pursuing the regular course as laid down in the Year Book. To carry forward this work eight teachers were employed. The time needed to complete the course is ordinarily four years. Upon graduation students receive a diploma.

Degree of Bachelor of Music.—The degree of Bachelor of Music is conferred upon such students as, in addition to the foregoing, evince the skill and conception necessary artistically to perform the works of the most exacting character, and show an extended acquaintance with the science and history of piano-forte literature and piano-forte playing, and pass examination in harmony, counterpoint, musical forms, musical history and Acoustics. Aside from this, they must possess a good knowledge of

belles lettres, including French, German and Italian. This will add about two years to the tabulated course.

School of Painting.—The School of Painting was patronized by 46 students; 29 of these devoting their entire time to this branch of study. The course covers four years of time. Three hours of each day is spent in the studio.

Degree.—The degree of Bachelor of Painting (B. P.) is given on the satisfactory completion of two years more of work than the above,—gaining special skill in portrait and landscape painting in addition to such knowledge of Belles Lettres, including the French, German and Italian languages, as are provided for in the Letters course.

APPLIANCES IN THE SCHOOL OF ART.

Conservatory of Music.—The Conservatory of Music is supplied with all the instruments required for successful work. There are in the institution eleven pianos, eight of which are used for instruction purposes. One of these is kept in the chapel for use in concerts and on other occasions in which a piano is needed. This is an instrument of more than ordinary power. Each of the three literary societies has a valuable piano, which helps to make music an interesting part of the weekly exercises. Students in the Conservatory are able, to a large extent, to practice on college instruments. Aside from these the institution is able to supply students to an almost unlimited extent with the use of pianos at private residences in immediate proximity to the college buildings.

The institution possesses two organs, one of these with all the appointments of a two-manual pipe organ.

The college derives much benefit from the large pipe organ just placed in the new Methodist church.

The department possesses a technicon for use of piano students in disciplining the muscles of the hand.

The orchestra, composed of about fifty players, is supplied with all the variety of instruments employed for the production of orchestral music.

The Conservatory has a valuable musical library, which is being enlarged as desirable publications make their appearance. It is also in receipt of the best musical papers and journals.

School of Painting.—This school occupies a suite of rooms in the North College building, both as working rooms and for art gallery. The gallery contains a large number of studies covering a great variety of subjects. There are also many very fine imported studies—copies from celebrated painters—which represent the various schools of art. These afford the student a fine opportunity to study and compare the various methods of conducting art work. The department keeps on hand a large supply of easels of uniform pattern, with material, stands, etc., for the use of students. A complete set of models for drawing, consisting of cubes, cones, etc., are provided for use; also models of different parts of the human figure. The art room is supplied with a somewhat extensive collection of heads and busts of distinguished men of the past.

Complete provision has been recently made for study of decorative art.

LITERARY AND SCIENTIFIC APPLIANCES.

Five hundred and ten volumes were added to the library during the

year. In twelve years it has grown from 2,000 to nearly 10,000 volumes, and it contains a wide range of helps and references in all kinds of work.

The Museum has been considerably enriched by the gift and purchase of specimens. It is coming to be of great interest both to students and the general public. It is comprehensive, and is rich in specimens, both in mineralogy and natural history. Also it contains large collections of objects which represent the arts and life of eastern lands.

The Astronomical Observatory is admirably equipped for all forms of observations and work. The instruments are of the best class, the chief among them being as follows:

1. A transit circle, by Fauth & Co., of four inches aperture, reading by two micrometer microscopes to single seconds. It is provided with micrometer in right ascension and declination.

2. A sidereal clock, by Fauth & Co.

3. A chronograph of latest style, by Fauth & Co., with Saegmueller's maintaining power.

4. The equatorial, constructed and mounted by Alvan Clark & Sons, of eight inches clear aperture, and provided with circles, driving clock, filar micrometer and a full outfit of eyepieces, both Huyghenian and Ramsden.

The above instruments are all in electrical connection, that all observations may be recorded by the Chronograph.

The meteorological instruments include a standard barometer, maximum and minimum thermometers and psychrometer by J. & H. J. Green, rain and snow gauges, etc.

Excellent instruments are also provided for practical work in field surveying.

The Astronomical and Meteorological Library contains nearly 300 bound volumes and pamphlets, always accessible to advanced students, for reference and research. Works of an elementary and more popular character are left in the general library.

During the past year the finely graduated circle on the transit instrument, that had become injured and somewhat inaccurate, has been replaced by one newly graduated that affords very superior results.

A screw-cutting engine lathe, by F. E. Reed, of Worcester, Mass., has been purchased for the workshop, and is used in the manufacture and adaptation of apparatus for the illustration of physical problems.

Laboratories.—The chemical laboratory contains tables for thirty-five students, fully furnished with re-agents and all apparatus required for the thorough demonstration of the facts and principles of the science.

The Biological Laboratory contains tables for forty students, sixteen compound microscopes, several hundred mounted objects, and all necessary appliances for preparing and mounting specimens in all departments of biological research.

These appliances are constantly increasing. They are regularly used in the class room, where they furnish experimental proof of the laws and theories discussed.

The Commercial Department has all modern appliances for general commercial work, also in shorthand and typewriting and is very prosperous. The department has three typewriters.

ENDOWMENTS.

The chair of History has been endowed by Hon. Henry M. Loud of Oscoda by the gift of \$30,000. Several other donations have been received ranging from a few hundred to a thousand dollars each.

EXPENSES.

In all Literary work, tuition free. In the College of Liberal Arts, tuition free. In the Preparatory School, tuition free. In Music, Painting, Oratory, and Commercial studies, tuition moderate.

There is an incidental fee of \$2.50 or \$5.00 a term—to meet College expenses for fuel, lights, repairs, janitor's services, etc.,—but no charge for literary instruction.

Expenses of the student may be kept at a very low figure. He can make his board range from \$2.50 a week down to \$1.00 a week.

All of which is respectfully submitted.

L. R. FISKE,
President.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—The undersigned, State Board of Visitors to Albion College, would respectfully report as follows:

Two members of the board, the chairman and Miss French, were privileged to visit the college on the same date, June 13, and spent the day in as interesting and profitable investigation and examination of the work, methods, appliances and general character of the school, as the rather rapid and unsatisfactory review of a single day would permit.

Although organized under the auspices of the Methodist church, and included in the list of "Denominational Colleges" of the State, Albion College is ambitious beyond the degree of merely affording sympathetic educational opportunities for its denominational friends and patrons, and in great part is its ambition being attained. The college is healthfully religious in tone and character, but is rather an institution for general learning and higher culture, and not a sectarian or theological school. This is said, as the result of information gained by our visit, to disabuse mistaken opinions concerning the school held before, in part, by at least one member of your board.

There is a genuine educational enthusiasm prevailing at Albion College, inspired, of course, by the earnest, enthusiastic work of the faculty, at the head of which stands Dr. L. R. Fisk, President, whose energy and ambition is successfully supplemented by his efficient assistants. The school is especially strong in the departments of history and practical astronomy, and in the departments of mathematics, modern and ancient languages is hardly surpassed by any similar school in the State. The provision for the acquirement of proficiency in painting, in all the different branches of the art, and for the study of vocal and instrumental music, are fully equal

to the advanced position of these accomplishments in our modern educational institutions, at Albion College.

In a questioning, rather than in a critical way, we would call attention to one or two matters noted, which may or may not be actual existing faults of the school. The first is, as to whether the literary degrees conferred by Albion College fully represent the scholarship necessary to make them in fact as they appear in name. It is true of many educational institutions of the present day, that the ambitions of their faculties or managing boards to give evidence of growth and increasing results, as shown in the proportions and classical claims of their graduating classes, leads to a very material lowering from the standards of scholarship presumed to be represented in the historical degrees. The courses of study of such institutions are made dangerously flexible to provide for personal and peculiar requirements, and the wide range of elective studies permit of selected courses which do not provide the culture and scholarship usually ascribed to the possessors of such degrees. These suggestions are not intended to apply to a present fact as pertaining to Albion College, but to a present tendency, and a possible future fault of that institution.

- Your committee was not favorably impressed with the manner of conducting the chapel exercises at Albion. The ringing of the bell announced the time for opening the exercises, but there did not appear to be an exact moment when every student intending to be present must be seated and silent, as is necessary for the proper participation in such devotions. They entered the chapel as individuals or in selected groups, as suited their pleasure, and not in a body, and the exchange of smiles, nods of recognition and even whispering, while the exercises were in progress, indicated a lack of appreciation of the proprieties on the part of such students, and a failure to exact the discipline necessary to attain healthful rather than hurtful effects from such exercises. It is possible that in the effort to avoid the appearance of being a sectarian school, which it is not, a too liberal tendency in such matters as are above referred to, has been assumed and permitted.

In conclusion your committee would say, that we believe Albion College to be a strong and progressive school, presided over by strong and progressive educators. Our commendations are sincere, and if our criticisms seem undeserved and not applicable, we hope they will be accepted with the charity due to defective observation and inaccurate judgment. We are not always as others see us, but it is always interesting and helpful to see as others see us.

PERRY F. POWERS,
ISABELLA G. FRENCH,
BERTHA McELHENY,
Board of Visitors.

ALMA COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK, *Supt. of Public Instruction*:

SIR—I have the honor to report that the past year has been one of marked prosperity, touching the general growth and development of Alma College.

In common with all our western institutions of learning, Alma needs more money. More buildings are wanted. Larger endowment, and more generous equipment of laboratories, but on the whole, as a new enterprise there is little to complain of, and the needs are such as time will supply.

An excellent Faculty, an encouraging number of students, a wider reach of influence, and increased promise of permanence in all departments of its work, give to the outlook the color of good cheer, and the patrons of the College are full of hope for the future.

The marked feature of growth at Alma is the library. Today at the end of the third year since the opening of the institution, there are not less than nine thousand bound volumes in the library building, and nearly as many pamphlets beside. Superadded, are about two thousand volumes already donated to the collection, awaiting some legal formalities, etc., before being turned over to the College. It is reasonably expected that by next Commencement, in June, there will be not less than eleven thousand volumes on the shelves. These books are almost entirely of such character as are of service to Faculty and students in their everyday work. Large and valuable additions have been made during the year to the collections of the department of natural science, and in some directions, this collection is especially excellent.

The corps of instructors is now complete according to the present arrangement of chairs, except the chair of English, the work of which is divided between the several members of the Faculty.

The so-called Commercial Department was dropped at the end of the spring term, as being incongruous with the other work of the institution.

With new reasons for encouragement, the friends of Alma look on into the years which shall ripen its growth, with faith that each year shall bring new evidence of its right to be, and prove that its founders did not overestimate the importance and value of such an institution, to the young men and women of northern Michigan.

Respectfully,

GEO. F. HUNTING,

President.

BATTLE CREEK COLLEGE.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—The majority of the board visited Battle Creek College on the 12th and 13th of May, 1890. They were most cordially received and pleasantly entertained, while every opportunity was given by the President and faculty for securing accurate data for making our report.

This college was founded in 1874 by the Seventh-Day Adventist Educational Society.

It is situated on a fine eminence in the western part of the city of Battle Creek, and its buildings are surrounded by a beautiful and well-kept campus of about seven acres; these buildings are mostly new, well planned and healthful. The Battle Creek Medical and Surgical Sanitarium, with its beautiful lawn, is located east and just across the street from the College campus.

Everything in and about the buildings has the appearance of neatness and order, while all the surroundings and influences seem to be of a character well calculated to insure physical, intellectual and moral healthfulness.

The buildings and grounds are estimated to be worth one hundred thousand dollars. The institution has no endowment and is supported by tuition and by the gifts of its friends. At the time of our visit there were about three hundred students in attendance, of which over 100 were ladies; the total attendance for the past year of both ladies and gentlemen having been over five hundred, and representing more than thirty different States, Territories and foreign countries. The library is small, but is faithfully used by the students; it should be enlarged at once to meet the necessary demands of the school. More apparatus is needed especially in the study of Physics, Chemistry and Biology.

The greatest need, however, is that of a laboratory in which these studies may be properly taught.

It is sincerely hoped by the committee that the friends of this worthy institution may speedily supply these pressing needs and thus assist in the good work which its consecrated, loyal faculty are doing and also bring new courage to them, as well as better facilities for gaining knowledge, deserved by its well-behaved, intelligent body of students.

The College has a gymnasium which is quite well patronized, especially in the fall and winter terms. It has both a preparatory and a college department, about three-fifths of its students being in the college department.

The methods of teaching are fair, in some cases excellent.

The moral influences are exceptionally good.

The utmost harmony prevails between the Faculty and the students, growing out of a sincere respect of the students for the Faculty, which is no doubt engendered by an equally sincere interest on the part of the Faculty in the highest welfare of the students, combined with its steady purpose to loyally help them in the formation of a noble character.

Each non-resident student rooming in the College is required to work one hour each day in the week, for the sake of the valuable discipline of manual labor to both body and mind.

The total yearly expenses to each one who hires his board, room, etc., is about one hundred and forty dollars. One of the finest and most successful features of the institution is its "Home Life" plan of rooming and boarding. For a description of this plan and a statement of the results of its adoption by the Board of Trustees, we would refer all interested to the annual catalogue of the College which may be secured by simply addressing such a request to its President, William W. Prescott, A. M.

Respectfully submitted.

A. E. HAYNES,
W. D. CLIZBE,
A. BURRAGE,
Board of Visitors.

DETROIT COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—In accordance with the requirements of the law, I have the honor to present the following report of Detroit College for the year 1889-90.

FACULTY.

Rev. M. P. Dowling, S. J., President.

Rev. Charles Coppens, S. J., Vice-President and Prefect of Studies.

Rev. James A. Doonan, S. J., Professor of Mental and Moral Philosophy, Evidences of Religion.

Rev. C. J. Leib, S. J., Professor of Natural Sciences, Higher Mathematics and Astronomy.

Rev. Francis J. Berberich, S. J., Professor of Chemistry, Book-keeping and Commercial Law.

Mr. Bernard J. Otting, S. J., Rhetoric.

Mr. Michael Stritch, S. J., Poetry, Lecturer on English Literature.

Rev. John A. Gonser, S. J., Humanities.

Rev. Joseph DeSmedt, S. J., First Academic.

Rev. Hugh J. Erley, S. J., Second Academic.

Mr. William Mitchell, S. J., Third Academic.

Mr. Chas. F. Crowley, A. M., Commercial.

Mr. George E. Parker, A. B., Preparatory.

Rev. Joseph DeSmedt, S. J. }

Mr. Bernard Otting, S. J., } Prefects of Discipline.

Mr. William Mitchell, S. J. }

PRECEPTORS IN SPECIAL STUDIES.

Rev. Joseph De Smedt, S. J., French.

Rev. Hugh J. Erley, S. J., German.

Rev. Francis Berberich, S. J., German.

Mr. Bernard Otting, S. J., Elocution.

Rev. Hugh J. Erley, S. J., Elocution.

Mr. William H. Machen, Drawing.

Rev. C. J. Leib, S. J., Shorthand.

Mr. John M. Tice, Penmanship.

Mr. Gregory Freytag, Vocal Music.

THE NEW BUILDING.

A new building was begun during the course of the year 1889. The work advanced so rapidly that the new college was ready for use at the opening of the session, September 1, 1890. The edifice is of stone, with a frontage of 185 feet and a depth varying from 75 to 120 feet. The eastern portion, together with the house formerly devoted to combined collegiate and pastoral use, is the residence of the Faculty. All the rest is given up to class rooms, scientific department, parlors, offices, library, chapel, lecture hall and other apartments necessary for college uses.

This undertaking would have been an impossibility but for the liberality of some benefactors of the College who subscribed sums of \$5,000 each. These donations are in the names of Francis F. Palms, Thomas F. Griffin, Hon. Chas. Moran (in memoriam), Hon. Wm. B. Moran, Jeremiah Dwyer, Charles F. Hammond, Fred T. Moran, William J. Hammond.

To these benefactors, as well as to Mr. Wm. Y. Hamblin, Mrs. Eliza Watson, Mrs. Alice Du Charme, Mrs. Richard Storrs Willis and Mr. James L. Edson, we are deeply indebted.

After devoting to this new enterprise all the sums derived from subscriptions, in addition to the proceeds of the sale of the old college property, a debt of about \$60,000 will still weigh upon the College and retard to some extent its further progress.

It is hoped that other benefactors, made aware of the debt still remaining, will help to lighten the burden, in the interests of higher education in Michigan.

COURSES OF INSTRUCTION.

There are two courses of instruction, the classical and the commercial.

THE CLASSICAL COURSE.

The Classical Course is designed to impart a thorough liberal education. In the accomplishment of this purpose the ancient classics hold the first place, as the most efficient instrument of mental discipline. Besides Latin, Greek and English, the course embraces Religious Instruction, Mental and Moral Philosophy, Astronomy and Mathematics, History, Literature, the Natural Sciences, in a word, all the usual branches of a complete education. It has been found by long experience that this is the only course that fully develops all the faculties, forms a correct taste, teaches the student how to use all his powers to the best advantage, and prepares him to excel in any pursuit, whether professional or commercial.

The course is divided into two departments, Collegiate and Academic.

THE COMMERCIAL COURSE.

This course offers to those who cannot or will not avail themselves of a regular classical training, the means of acquiring a good English or Commercial education. It embraces Book-keeping, an ample course of Arithmetic, with the elements of Algebra; and to a complete Grammar course it adds the study of style, the principles and practice of the minor species of Composition, especially letter-writing, and a course of Religious Instruction. It is completed in four years, and prepares students for commercial pursuits.

PREPARATORY.

The object of this class is to introduce younger pupils to the study of the first principles of Grammar, chiefly by class drill; to form them to habits of attention and application, and thus prepare them for one of the regular courses of instruction.

Yours respectfully,
M. P. DOWLING, *President.*

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—The undersigned members of the committee appointed by you to visit Detroit College would respectfully report that we devoted June 10 to an inspection of the work of that institution, that we were received with marked cordiality, and that every facility to become acquainted with the character and condition of the College was proffered us. We listened to recitations in English Grammar, Rhetoric, Composition, Philosophy, Ethics, Latin Grammar, Cicero, Virgil, Greek Grammar, Anabasis, Arithmetic, Algebra, and Trigonometry, and found the classes usually large and the recitations rapid and interesting. Everywhere there was abundant evidence of thorough and faithful instruction. We were especially pleased with the careful articulation and enunciation of those who recited, but this was only one of many evidences of efficient teaching. There are few teachers in our high schools who would not receive valuable suggestions from a visit to Detroit College.

E. A. STRONG,
E. L. WALTER,
Board of Visitors.

DETROIT HOME AND DAY SCHOOL.

REPORT OF THE PRINCIPAL.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—An annual report of an educational institution like the Detroit Home and Day School to be in compliance with the requirements of the law must of necessity be almost a repetition of previous reports.

1. The real estate of the institution is worth from forty-five to fifty thousand dollars.

2. The entire income from tuition fees and boarding of pupils for the year was \$27,085.05.

3. The number of regular instructors employed in all departments, fifteen (15), the same as last year.

NUMBER OF STUDENTS ENROLLED 1889-'90.

Collegiate Department—		
Girls.....	58	
Preparatory—		
Boys (retained for this year).....	7	
Girls.....	48	53
Primary Department—		
Boys.....	16	
Girls.....	23	39
Kindergarten—		
Boys.....	13	
Girls.....	17	30
Taking special studies.....		5
Alumnae Class.....		12
Total.....		197
Resident pupils.....		30
Resident pupils from Detroit for a part of the year.....		3

EXPENSES.

Tuition in Kindergarten, per term, (one-half year).....	\$25 00
“ Primary Department, per term, (one-half year).....	25 00
“ Preparatory Department, per term, (one-half year).....	40 00
“ Collegiate Department, per term, (one-half year).....	50 00
Stationery, Preparatory (with spelling), per term, (one-half year)....	50
“ Collegiate, per term, (one-half year).....	25
Music.....	50 00

HOME DEPARTMENT.

Board and Tuition, per term, (one-half year)	\$250 00
Washing (more than allowance), per doz.....	75
Meals served in room, each.....	25

COURSE OF STUDY.

There are two courses of study provided: The scientific which is for those who expect to complete their education in this school, and the classical course which is arranged for those who desire to prepare for college.

Each of these courses extends over a period of twelve years exclusive of the kindergarten course.

KINDERGARTEN COURSE.

In the three years' work of the kindergarten there are presented twenty gifts. By a systematic and progressive handling of these, the children are led from the simplest features of each to the most complex. Color, form, material, size, dimension, position and number are thus brought forward and the observation, the memory and the habit of expression cultivated. Manual training, concentration of thought and happy association with other children are invaluable results of the kindergarten work.

CONNECTING CLASS.

1. Form, printed and written, name, and sound of every letter of the alphabet taught from simple words associated with objects.
2. Drill in finding out new words combining sounds thus learned.
3. Practice in printing and writing such words until it can be done from memory.
4. Reading from chart for expression and recognition of words already learned.
5. Writing numbers to 20. Counting to 100.
6. Analysis and synthesis of numbers to 10 by association of the numbers with objects.
7. Practice work from blackboard.

PRIMARY COURSE.

First Year.

1. NUMBER—*a.* Writing numbers to 100 by Arabic and Roman characters.
b. Analysis and synthesis of numbers from 1 to 20.
c. Adding and subtracting by 2's, 3's, 4's, 5's and 10's to 100.
2. READING—*a.* Barnes' First Reader.
b. Appleton's First Reader, supplementary.
c. These two books used as a basis of training in finding out new words by the sound, in spelling, oral, written and phonetic, and in an intelligent and natural expression in reading.
3. WRITING—*a.* On slates, Spencerian system, small letters formed from the principles.
b. Harper's Copy Book, No. 1.

Second Year.

1. **NUMBER.**—a. Reading and writing numbers to four figures.
b. Adding and subtracting numbers to four figures.
c. Multiplication table to 25 as a multiple, with the idea of the factors as divisors and fractional parts.
2. **READING.**—a. Barnes' Second Reader.
b. Barnes' Third Reader, supplementary.
c. Division of words into syllables.
3. **SPELLING.**—a. Patterson's Common School Speller. Part 1.
b. Dictation of sentences requiring capitals and punctuation.
4. **WRITING.**—a. Slate drill on principles and joining of letters.
b. Harper's Copy Book, No. 2.

Third Year.

1. **ARITHMETIC.**—Fish's Primary Arithmetic, chapter two.
2. **GEOGRAPHY.**—a. Direction. Distance.
b. Careful study of local geography { 1. Detroit.
2. Wayne Co.
3. Michigan.
c. Michigan as one of the United States.
d. General study of the United States { 1. Boundaries.
2. Capital
3. Rivers
and Lakes.
4. Mountains.
5. Coast.
e. General Study of N. A.
f. General study of Eastern and Western Hemispheres.
3. **READING.**—a. "Seven Little Sisters," Jane Andrews.
b. Its sequel, "Each and All."
c. Young Folk's Book of Poetry. Part 1.
4. **SPELLING.**—Patterson's Speller. Part II, to p. 44.
5. **WRITING.**—Pen and ink—small letters by principles.

Fourth Year.

1. **ARITHMETIC.**—a. Fish's Primary Arithmetic, Chapter three.
b. Supplementary work from Board.
2. **GEOGRAPHY.**—Appletons' Elementary Geography, through N. A., with map drawing.
3. **READING.**—a. The Story of Our Country. Monroe.
b. Stories of Heroic Deeds. Jonhonnot. □
c. Young Folk's Book of Poetry. Part II.
4. **SPELLING.**—Patterson's Speller, Part 2, completed.
5. **WRITING.**—Pen and ink. Capitals and practice.

General Exercises.

1. **ORAL LESSONS.** a. The human body, b. plants, c. animals.
2. **CALISTHENICS AND MARCHING.**

PREPARATORY COURSE.*Completed in four years.*

ARITHMETIC.—Mental and written, completed.

GEOGRAPHY.—(a) First and second years.

(b) Fourth year, general review.

ENGLISH COMPOSITION.

HISTORY OF THE UNITED STATES.

ENGLISH HISTORY.—Readings.

READINGS—Selections of prose and poetry from the best English and American authors.

SPELLING AND DEFINING.

PENMANSHIP.

COLLEGIATE COURSE.

Completed in four years.

MATHEMATICS—Algebra, Geometry, Trigonometry (elective).

NATURAL SCIENCES—Physiology, Botany, Physics, Astronomy, Chemistry.

FRENCH, GERMAN, LATIN, OR GREEK.

ENGLISH—Analysis and Syntax, Rhetoric, English Literature.

HISTORY—English, French, Roman, Grecian. In connection with each a journal is written, recording imaginary travels through the different countries, with the study of the important physical features, the most famous cities, buildings and art treasures of each. Mythology is taken up in connection with Greek History.

ENGLISH LITERATURE—The course of English Literature may be outlined as follows:

SECOND YEAR, COLLEGIATE DEPARTMENT—The History of the English novel.

THIRD YEAR—The literature of the eighteenth and first half of the nineteenth centuries.

FOURTH YEAR—(1) The Elizabethan Era, followed by a careful study of the life and works of the following authors: John Milton, William Shakespeare, Francis Bacon, Edmund Spenser.

(2) The early English, its history and development as illustrated in literature. Special study given to Chaucer.

ALUMNAE COURSE.

This is intended for graduates of the School who wish to continue systematic and thorough work. Such topics are selected as will supplement the regular course and will widen the range of knowledge in History and Literature. Definite work for each day in the week is assigned, requiring from one to two hours' daily study, and a written report of work done is given to the director of the class at its weekly meeting on Saturday morning.

A review is taken, and an oral examination at the completion of each topic.

For a few years both boys and girls were admitted, but during this year boys were not admitted to any department above the Primary, and thus it becomes a school exclusively for girls. This change will account for the decrease in the enrollment from the previous year, but it is a return to the original design of the institution. The gross receipts were larger than any previous years.

Respectfully submitted.

J. D. LEGGETT,
Principal.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—We, the undersigned, members of the committee appointed to visit the Home and Day School in Detroit, visited the school in May last, and beg leave to submit the following report:

The school is in the heart of one of the beautiful residence portions of the city and the building is all that could be desired in the way of comfort and convenience for school work.

The school was founded in 1878 and the present building erected in 1884. It is, as the name indicates, both a home and a day school. The original intention was to admit girls only; but boys are now received in the lower departments.

The course of study, not including the kindergarten, covers a period of twelve years. Pupils upon graduation from the classical course are prepared for college.

The number of pupils enrolled during the year approximates two hundred, taught by fifteen teachers. The pupils have the use of a well equipped library.

The kindergarten course of three years is a prominent feature of the school and its equipment is all that could be desired. The work is done in an unusually intelligent manner.

In the remaining departments the work is carried on in much the same way as in the average Michigan high school.

The pupils seemed happy in their work and in those recitations we heard showed they were capable of hard, earnest study.

The entire school seemed pervaded by a refined, homelike atmosphere which must have a decided effect on the morals of the pupils.

During the intermission pupils have the privilege of a well arranged and comfortable lunch room where a lunch can be procured at merely nominal rates.

We were fortunate in visiting the school at the time Mrs. Abby Sage Richardson was giving her course of lectures, one of which we heard.

The Misses Leggett spare no pains to give the young ladies and other pupils the very best of advantages.

Respectfully submitted,

C. N. KENDALL,
IDA M. ROBINS,

Board of Visitors.

HILLSDALE COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

SIR—Following is the report of Hillsdale College for the academic year 1889-90.

The College is governed by a Board of 35 Trustees, of which the President is chairman. It contains an Academic (Classical, Philosophical, Literary and Normal Courses), a Theological (Seminary and English Courses), Music, Art and Commercial departments and a Preparatory department.

The faculties of instruction are composed as follows:

I. ACADEMICAL.

Hon. George F. Mosher, A.M., President, International Law, Mental, Moral and Political Philosophy, Evidences and History of Civilization.

Arthur Edwin Haynes, Ph. M., Fowler Professor of Mathematics and Physics.

Kingsbury Bachelder, A.M., Professor of the Greek Language and Literature.

Frank Smith, Ph.M., Professor of Chemistry, Biology and Geology.

William F. Tibbetts, A.M., Waldron Professor of the Latin Language and Literature.

Charles H. Gurney, A.M., Alumni Professor-elect of Rhetoric and Belles-lettres.

Harriet A. Deering, Ph. B., Principal of the Ladies' Department and of the Normal Department.

Mrs. Frances Stewart Mosher, A.B., Professor of French and History.

Mrs. Ellen A. Copp, A.M., B.D., Instructor in German.

Rev. Daniel Branch, A.M., Emeritus Professor in Department of Ancient Languages.

Mrs. Marie M. Pierce, B.S., Instructor in Ancient History.

Elias P. Lyon, Tutor in Latin.

Miss Sara E. Parker, M.S., Instructor in Roman History.

Evelyn MacDougal, Instructor in Elocution and Ladies' Gymnasium Work.

Henry J. Leggett, Orris O. Force, Tutors in Mathematics.

Louis M. Hardenburgh, Assistant in Chemistry.

Orin T. Bolt, Instructor in Gymnasium.

II. THEOLOGICAL.

Rev. Ransom Dunn, D.D., De Wolf Professor of Homiletics.

Rev. Ashmun Thompson Salley, A.M., Dunn Professor of Sacred Literature.

Rev. John Scott Copp, A.M., D.D., Burr Professor of Systematic Theology and History of Christian Doctrine.

Rev. Delavan Bloodgood Reed, A.B., Marks Professor of Ecclesiastical History.

_____, *Smith Professor of Christian Metaphysics and Theology.

_____, *Aldrich Professor of Biblical and Pastoral Theology.

*The Studies of these professorships are taught by the professors already appointed.

III. MUSICAL.

Melville Warren Chase, Mus. Doc., Professor of Piano-forte Organ and Theory.
 Alvah Graves, Professor of Voice Culture and Singing.
 Mrs. E. Louise Williams, Teacher of Piano-forte.
 Miss Lelia Smith, Teacher in Vocal Culture.
 Dixon J. Churchill, B.Ph., Teacher of Sight Reading, Chorus and Voice Culture.

IV. ART.

George B. Gardner, Professor of Painting and Drawing.

V. COMMERCIAL AND TELEGRAPHIC.

Alexander Campbell Rideout, LL.D., Principal, Professor of Political Economy, Science of Accounts, and Electrical Science.

I. ACADEMICAL DEPARTMENT.

I. Classical Course.

The studies required for the Freshman class are: The common English branches; Latin Grammar, including Prosody; Caesar, four books; Cicero, six orations; Vergil's *Æneid*, six books; Latin Prose Composition; Greek Grammar and Lessons; Xenophon's *Anabasis*, three books; Homer's *Iliad*, two books; Algebra, to Part III. Olney's Univ.; Plane Geometry; Composition and Rhetoric; United States History; Ancient History; Civil Government; Elementary Physics; Elementary Zoology, Elementary Botany and Elementary Physiology.

The studies in the classical course are as follows:

FRESHMAN YEAR—De Senectute and Cicero's Letters, Livy, Horace, *Iliad*, *Odyssey*, Greek Historians, Solid Geometry, III Algebra or Native and Greek History, and Trigonometry.

SOPHOMORE YEAR—Tacitus, Demosthenes, *Antigone*, Chemistry (2 terms), Botany, French (3 terms).

JUNIOR YEAR—History of France, Germany and England, German (3 terms), Mechanics or Zoology, Physics or Physiology, Astronomy or Geology.

SENIOR YEAR—Logic, Rhetoric, English Literature, Psychology, Evidences, Ethics, History of Civilization, International Law and Political Economy.

II. Philosophy.

The studies required for the Freshman class are the same as those in the classical course, except that one year of French is required, and no Greek. But instead of Latin for two years in this course, the student may take the Greek required for admission to the freshman year of the classical course.

The required college studies are two terms of advanced Latin, two years of French and German, two terms of Chemistry, one of Qualitative Analysis, 1 of Botany, 9 of higher Mathematics including Trigonometry, Calculus, Mechanics, Physics and Astronomy, 3 terms of History, one each of Zoology, Physiology and Geology, and the senior studies of the classical course.

III. Literary Course.

A preparation for either the Classical or Philosophical course will admit to the Literary course. This course is intended for those who wish more of the modern languages, and greater freedom in electives, than are offered in the other courses. Upon those who complete it the degree of Bachelor of Literature will be conferred.

IV. Normal Course.

This department aims at a thorough preparation of teachers for their work, first, by careful reviews of the common English branches, with methods of teaching the same, and frequent development lessons given by the students; second, by a thorough training in those subjects which a normal school should qualify its graduates to teach; third, by such a course of professional study as will qualify for the work of organizing, instructing and governing in our common and graded schools.

The text books in use are as follows:

GREEK—Goodwin's Grammar, White's First Lessons, Kelsey's or Goodwin's Anabasis, Seymour's or Keep's Iliad, Perrin's Odyssey, Morris's Thucydides, Cook's Herodotus, Tyler's or D'Ooge's Demosthenes, Richardson's Æschines, D'Ooge's Antigone, White's Oedipus Tyrannus, Tyler's Greek Lyric Poets, Seymour's Selected Odes of Pindar.

LATIN—Harkness' Grammar, Collar and Daniell's Beginner's Latin Book, Kelsey's Caesar, Harkness' Cicero, Daniell's Latin Composition, Allen and Greenough's Ovid, Greenough's Vergil, Schuckburgh's De Senectute, Jean's Select Letters of Cicero, Chase and Stuart's Livy and Horace, Tyler's Tacitus.

GERMAN AND FRENCH—Whitney's German Grammar, Keetel's French Grammar, and both current and classical selections from each language for translation and study.

MATHEMATICS—Robinson's Arithmetic, Van Velzer and Slichter's Algebra, Chauvenet's Plane and Solid Geometry, Olney's Trigonometry, General Geometry and Calculus, Olmsted's Mechanics and Physics (Kimball's Revision), Young's General Astronomy.

SCIENCE—Gage's El. Physics, Gray's El. Botany, Packard's El. Zoology, Martin's El. Physiology, Remsen's Chemistry, Bessey's Botany, Orton's Zoology, Martin's Physiology, Le Conte's Geology.

HISTORY—Myers' United States, Myers' Ancient, Allen's Roman, Taylor's German, Guizot's French, Montgomery's English.

MISCELLANEOUS—Clark's Elementary Rhetoric, Young's Civil Government, Hill's Rhetoric and Psychology, Jevon's Logic, Welsh's English Literature, Hopkin's Evidences, Robinson's Moral Science, Guizot's History of Civilization with Emerton's Introduction, Davis's International Law, Walker's Political Economy, Hinman's Physical Geography, Putnam's Primer of Pedagogy.

ADMISSION ON CERTIFICATES.

Students who bring certificates of work done in other institutions of learning will be admitted to classes in Hillsdale College, *without examination*, as follows:

1. In accordance with arrangements already made, and until further notice, students will be admitted to our Freshman class who have completed the three preparatory years in Ridgeville, Rio Grande and Parker Colleges, and in Rochester (Wis.) Seminary.
2. Certificates of preparatory instruction under our own graduates will be accepted for what they will cover.
3. Students will be admitted without examination in studies covered by the Regents' certificate of the State of New York.
4. Certificates of standing will be accepted from those high schools in Michigan whose graduates are admitted without examination to classes in the State University.
5. Certificates of standing will be accepted from Hillsdale High School, and such other schools as a committee of the Faculty may recommend.

DESCRIPTION OF COURSES OF STUDY.

DEPARTMENT OF LANGUAGES.

Ancient.

Students of Greek and Latin in this College investigate words, idioms, sentences, paragraphs, plans of discourse, thought and style of masterpieces, varieties and relationship of poetry and prose; explain scientific terms from Greek and Latin; constantly refer to collateral reading; study the history and origin of these languages with their place in philology and in modern language and literature. Such study has an intense interest, and wins valuable results in true literary and scientific culture.

Modern.

ENGLISH.

RHETORIC—In this department the classes review English Grammar and then take up the subject of Composition, giving attention to invention and style and the preparation of addresses.

Three themes a year are required from each member of the senior class, and are read and corrected by the instructor in rhetoric.

LITERATURE—Careful attention is given to the study of English (and American) Literature. The history of the language, its notable productions, authors and influence are features of the work. It is the aim of the instruction to form a correct taste, and to develop some familiarity with the rules of criticism.

GERMAN.

The objects which are kept in view during the two years occupied in the study are: To enable the student at the end of his course to read at sight any work in modern German, to converse to some extent and to understand the language when spoken.

A thorough study of the grammar and literature of the language is the method employed.

FRENCH.

The study of French extends through two years. At the end of the first year the student is prepared to read correctly at sight simple French, to write intelligently, and use ordinary conversational phrases. Study of the grammar, practice in conversation, and reading of modern and classic French authors, are continued through the second year.

DEPARTMENT OF PHILOSOPHY.

The course in Philosophy, which is pursued by the Senior class through the year, is conducted by recitation from approved text books, with discussions in the class rooms, abstracts and lectures. It embraces Logic, Psychology with special reference to the facts and laws of mental operation, Moral Philosophy, developing the principle of accountability, the Evidences of Christianity, and the principles of International Law and Political Economy. In the last study careful attention is given to the laws of national wealth and prosperity, with discussion of wages, socialism and tariffs.

After a careful study of the theory of both inductive and deductive Logic, some attention is given to the analysis of argumentative works and the detection of fallacies.

DEPARTMENT OF HISTORY.

The course in history embraces the ancient history of Persia, Greece, and Rome, the history of England, France and Germany, United States history and the History of Civilization.

DEPARTMENT OF MATHEMATICS AND PHYSICS.

The course in Mathematics is extended, and well calculated to lead the student up to vigorous, independent thought.

GEOMETRY—In reading Geometry care is taken to point out its practical applications, and many exercises are given for original demonstration.

ALGEBRA—During the last term of Algebra the Theory of Limits is made the basis for developing algebraic and logarithmic functions, and for a thorough discussion of the Theory of Equations, the Loci of Equations being also used to illustrate the more abstruse principles.

TRIGONOMETRY AND SURVEYING—After the study of the theory of Trigonometry (plane and spherical) and Surveying, the class is required to take several weeks of field practice on the various problems of Plane Trigonometry and Surveying.

ASTRONOMY—The regular work in Astronomy includes the theory as presented in most college text books, together with the solution of various problems in Mathematical Astronomy. A first class equatorially mounted telescope (5 in. object glass) is freely used, as far as practicable, in assisting the student to gain a clear conception of the physical aspect of the heavenly bodies. A course of ten free popular lectures on astronomy, to which all students are invited, is given in the spring term.

GENERAL GEOMETRY AND CALCULUS—After a careful study of the elements of General Geometry, including some of the equations of the higher plane curves, several months are spent in mastering the principles of the Differential and Integral Calculus, which are then employed in the further investigation of the Loci of Equations and the solution of practical problems.

PHYSICS—In the study of Physics special attention is given to the practical applications of Electricity and Magnetism. In connection with the class room work a very full course of experiments is given as a means of illustrating the principles investigated.

DEPARTEENT OF CHEMISTRY.

Laboratory work, ten hours per week, will be required in the study of Inorganic Chemistry, continuing through the fall term and part of the winter term.

Lectures in Organic Chemistry will be given in the winter term.

In the Spring term ten hours per week in the Laboratory will be devoted to Qualitative Analysis.

DEPARTMENT OF BIOLOGY.

Radical changes have been effected in the methods and facilities of pursuing the life-studies—Botany, human and comparative Anatomy. The course is begun with 14 weeks in Botany. Microscopical work on vegetable tissues is followed by the class every day, by the aid of dissecting and compound microscopes. The botanical drill is from the first thoroughly practical. Comparative Zoology follows in the fall term of the Junior year, with dissections, work with the microscope and collateral reading. During the winter term in the study of anatomy as a foundation for physiology, the student is aided by a good supply of dissecting instruments, microscopes, charts, and books of reference.

DEGREES IN COURSE.

Until 1888, degrees in course were, as a rule, conferred on all graduates of three years' standing. In June, 1886, the Board of Trustees, upon petition, voted to confer no more such degrees after the annual commencement of 1887, except upon application therefor, and on satisfactory evidence being given that the applicants have spent at least three years succeeding their graduation in some literary pursuit.

II. THEOLOGICAL DEPARTMENT.

COURSES OF INSTRUCTION.

English Course.

The English Course is designed to meet the wants of those who cannot take the Full Course. Students of the English Course may study the Greek and Hebrew, so far as they are able, under the direction of the Faculty.

Full Course.

FIRST SEMINARY YEAR.

GREEK EXEGESIS—New Testament Grammar, Lectures on the Origin and Nature of New Testament Greek and kindred topics, Essays by the class on questions of Geography, Biography, etc., Exegesis of select portions of the New Testament.

HEBREW—Hebrew Grammar, Exegesis of the Old Testament.

ENGLISH BIBLE—Its Authors, Authenticity, Genuineness, History, and the Interpretation of its Books.

SECOND SEMINARY YEAR.

SYSTEMATIC THEOLOGY—Lectures on Religion, True and False, the Knowledge of God and of His Existence, the Divine Attributes, and the Doctrine concerning Scripture, including Authenticity and Inspiration.

CLASS WORK—Regular review of the Lectures, reading of the assigned authors on each subject, and preparation of essays.

HEBREW—Exegesis of portions of the Old Testament, special attention being given to the structure and idioms of the language, the characteristics of Poetry, and the nature of Prophecy.

CHURCH HISTORY—Ancient, Mediæval, and Modern Church, including Missions.

THIRD SEMINARY YEAR.

SYSTEMATIC THEOLOGY—Lectures: The Trinity, the Works of God, Free Agency, Sin and Depravity, the Government of God, the Person of Christ, Atonement, the Office of the Holy Spirit, Regeneration and Sanctification, Repentance, Faith, Prayer, Obedience, the Law, the Church, the Ordinances, the Sabbath, the Ministry, Resurrection, Judgment, Future Reward and Punishment.

HOMILETICS—Lectures: The Nature of Preaching, Analysis of the Sermon, Construction of the Sermon, Rhetoric as applied to preaching, the Delivery of the Sermon.

CLASS WORK—Essays on assigned topics, Plans of Sermons, Delivery of Sermons, and Criticism of Published Sermons.

PASTORAL THEOLOGY—Lectures: Qualifications for the Ministry, Pastoral Duties, private and public, Revivals, Special Labors, and Ecclesiastical Relations.

CHURCH HISTORY—History of Christian Doctrines.

TERMS OF ADMISSION.

Candidates for admission to this Department must furnish evidence of good standing in some Christian church, and must be properly qualified to pursue the studies with profit.

Those who have received the degree of A.B., will be admitted to the Full Theological Course without examination. Other candidates for this course must give evidence of proficiency in the common English branches.

Persons not wishing to enter either course of study may, on advising with the Faculty, pursue any studies taught in the school.

EXPENSE.

Tuition and Incidentals are free in all the *academical departments of the College to all members of any evangelical church, who furnish the Faculty of the Theological Department satisfactory evidence of their fitness to prepare for the Ministry and of their need of such assistance.

AID.

The Free Baptist Education Society aid needy students preparing for the ministry, amounting to from thirty to sixty dollars per year, and it is hoped it will be increased in the near future.

LIBRARY.

This department has a valuable library and a fund for its increase.

GRADUATION.

The Degree of Bachelor of Divinity is conferred on those who complete the full course; and a certificate of graduation given to those who complete the English course.

* These do not include the Commercial, Art and Music Departments.

TEXT AND REFERENCE BOOKS.

Shedd: History of Christian Doctrine; *Mosheim*: Church History; *Knapp*: System of Theology; *Shedd*: Doctrinal Theology; *Bowne*: Theism; *Ladd*: Doctrine of Scripture; *Hazzard*: Man a First Cause; *Mueller*: Sin; *Dorner*: Person of Christ; *Waterland*: Trinity; *Whitby*: The Five Points of Calvinism; *Phelps*: Lectures on Sacred Rhetoric; *Broadus*: Homiletics; *Shedd*: Pastoral Theology; *Harper*: Elements of Hebrew Grammar and Manual; *Westcott & Hort*: Greek New Testament; *Christlieb*: History of Protestant Missions.

From the beginning of the 4th preparatory year until the close of the course, Prof. Reed will give regular drill in the various lines of Pulpit Education. Those in the English course will enter on elocutionary training at the beginning of the course. During the first two years of both courses Dr. Dunn will give weekly lectures to those desiring to preach, on the use of texts in preaching and the structure of sermons.

III. MUSIC DEPARTMENT.

COURSES OF INSTRUCTION.

Diplomas are granted to all who complete either course in a satisfactory manner. The following is an outline of the course of study for the

PIANO-FORTE.

First Grade—Germer, op. 32, Whitney's Method; Loeschhorn, op. 65, Book 1; Koehler, op. 151; simple pieces for recreation; technical exercises from Plaidy, Koehler, etc.

The exercises of this grade are devoted mainly to the acquirement of a pure legato touch, with the development of the wrist sufficient to secure a proper execution of the simpler rondo forms, and smaller pieces for recreation. The fingering of major scales is to be learned, with practice in the most common major keys.

Second Grade—Koehler, op. 50; Loeschhorn, op. 65, Books 2 and 3; Czerny, op. 636; Heller, op. 47; Germer, op. 28, Technic; Sonatinas by Clementi, Kuhlau, Dussek, Lichner, etc.

In this grade the minor scales are to be learned, and the major scales constantly practiced with accents; Arpeggios, on major and minor common chords are to be studied with accents. A knowledge of principal modifications of legato and staccato touch must be acquired.

Third Grade—Loeschhorn, op. 66; Heller, op. 46; Koehler, op. 128; Book 1; Heller, op. 45; Bach, Preludes; Easier Sonatas of Clementi, Haydn, Mozart, and Beethoven; Sonatas and pieces for four hands by Diabelli and others.

Exercises in this grade comprise major and minor scales in octaves, sixths and tenths, with accents; also four forms of arpeggio, including the chords of the dominant and diminished seventh. Different forms of staccato touch are to be practiced, and special attention will be given to the cantabile style, with appropriate selections for illustration.

Fourth Grade—Cramer's Etudes; Emery, Elements of Harmony; Heller, op. 16, or Jensen, op. 32; Bach, Inventions; Kullak, op. 48, Octave School, Book 1; Schumann, op. 15; Mendelssohn's Songs Without Words; Sonatas by Mozart and Beethoven; Selections from Mendelssohn, Chopin, Schumann, etc.; Salon pieces in modern style; Scales in double thirds and sixths, with practice of octaves and trills; Arpeggios in extended positions; Reading at sight four hand arrangements of Haydn's Symphonies, and other.

Fifth Grade—Kullak's Octave School, Book 2; Selections from Clementi's Gradus ad Parnassum; Moscheles, op. 70 and 73; Chopin, op. 10; Schumann, op. 82; Selections appropriate to this grade from Beethoven, Mendelssohn, Chopin, Weber and others; Ayer's Counterpoint; Wohlfahrt's Musical Composition; Cornell's Theory and Practice of Musical Form; Fillmore's History of Piano-forte Music; Klauwell's Musical Execution.

The course in harmony requires at least one year for its completion. It is commenced with the fall term of each year.

One year is the average time needed for each grade.

Recitals are held once in two weeks, in which all pupils are expected to participate.

CULTIVATION OF THE VOICE.

The course includes the following studies:

Rondinella, op. 76; Exercises in Vocalization; Bonaldi, Exercises; Marchesi, Savinilli, Vocalizes; Sieber, Etudes; Wieck, Etudes; Panofka, Etudes; Bordogni, Etudes in Bravura, and Operatic Studies.

Harmony and Counterpoint will be required for graduation in this course.

In the study of Voice Culture, attention is given to the following points: 1. A correct position of the body; 2. Freedom of the chest and true action; 3. Striving to gain a quiet open throat or pharynx; 4. True position and control of the larynx; 5. The tongue and epiglottis, their connection and hindrance of tone overflow; 6. The mouth as receiver, mould and resonator; 7. Tone waves, condensation, direction and movements; 8. Tone, form and concentration; 9. Chest Vibration, how secured; 10. Head tones, their reflection and qualification; 11. Equalizing the entire range; 12. Flexibility, the life of a good voice; 13. Vowels and consonants, and their proper formation.

The system used in elementary classes is the syllable and interval method, giving special attention to the chief tones in the major and minor keys, and the correct treatment of words and syllables.

A complete development of the voice, at this College, requires from three to five years. While much can be done by those of mature age in one year, it is well for those who wish to secure a fine voice, with the utmost purity of tone, and placed under control, to study at least three years, and if possible, five. Voices that have been injured may, if possible, be restored by study in this school.

ORGAN.

An organ with two manuals and two octaves and a half of pedals has recently been purchased. A course of study is arranged including all that is desirable in the best standard works.

IV. ART DEPARTMENT.

The studies of the first year in course are designed more especially to meet the wants of drawing teachers in the public schools of our country and to lay a solid foundation for those who intend to enter the professions of Engineering, Architecture, Designing, etc., as well as the higher fields of art. Certificates will be given to those who complete the first year of the art course.

The College grants diplomas to those who satisfactorily complete the Art course of four years.

COURSE OF INSTRUCTION.

First Year.

FALL TERM—Elementary principles of Drawing and Perspective.

WINTER TERM—Drawing from objects, casts and nature. Perspective completed.

SPRING TERM—Sketching and drawing from life and nature.

Second Year.

Sketching and drawing in pencil, charcoal and crayon; India ink and water color painting.

Third Year.

Painting in oil from original works and from nature; charcoal and crayon drawing from life and nature.

Fourth Year.

Painting from life and nature exclusively; charcoal and crayon studies continued. Lectures on art and artists and the history of ancient and modern art.

It is desirable that students entering this department for an art course should be possessed of a good English education, in addition to which a knowledge of the languages is deemed highly valuable, while the history of ancient and modern Art, Anatomy,

Zoology, Botany, Chemistry, Geology and Mineralogy should receive the earnest attention of art students. Those physically strong and energetic in study and who devote their whole time to the work, usually complete the studies laid down for the first two years in one. The one year's course in Drawing and Perspective is free to all matriculated students of the college. Expenses for instruction in the Art Course are about one hundred dollars per year.

Students who have already acquired artistic proficiency in other art schools may, upon examination, enter the Art Department at such point in the course as their accomplishments entitle them to.

ELOCUTION.

The work in Elocution aims at the highest standard of excellence in the Art of Expression, in both Voice and Action.

The plan of study embraces: Position of Body, Proper Breathing, Phonics, with reference to articulation and pronunciation, Practical Reading, Vocal Quality and Flexibility, Special Studies in the Language of Tone-Color, Inflection, Emphasis, Pitch, Force and Time, Studies in Delsarte, as related to bodily movements, Attitudes and Bearings (including exercises in walking), Practice of Scales of Gesture, Oratorical Studies and Analysis, Studies from Shakespeare, Principles of Art in Dramatic Work, Philosophy of Expression, Advanced Reading, Recitations and Criticism.

A critical class, free to all studying Elocution, meets frequently, where pupils have the privilege of reciting selections subject to criticism from fellow pupils and teacher; thus gaining confidence and ease of manner.

Physical strength and elasticity are indispensable to high vocal attainment and to the best graces of manner, hence all students of Elocution are expected to practice regularly in the Gymnasium.

APPARATUS.

All departments are supplied with suitable apparatus, which in Chemistry, Physiology, Astronomy, Surveying and like branches, is placed in the hands of students with instructions for practice, thus securing the most satisfactory and lasting results in these studies.

Instruction requiring illustration is given in amphitheatres, which affords the clearest views of charts, demonstrations and experiments.

Recently Prof. Elroy M. Avery, Ph. D., of Cleveland, O., has donated a two arc light Brush dynamo and other valuable electrical apparatus, which will be very serviceable in the Department of Physics. A fund of \$900 has also been raised, which will soon be expended in the purchase of additional apparatus.

MUSEUM.

The Natural History collections are valued at \$6,000, and are quite complete in Paleontology, Geology, Mineralogy and Conchology.

The collections have already outgrown the large room assigned to them at the rebuilding of the College, and a separate building of larger dimensions is a necessity.

HARRINGTON LABORATORY OF BIOLOGY.

By the gift of Hiram Harrington's family, of Woodstock, Ont., and other friends, the College has been able to open and furnish a new Biological Laboratory, comprising seven rooms. The microscopy room is furnished with fourteen Bausch and Lomb compound microscopes, with proper accessories. The dissecting room is well equipped with tables and dissecting cases. The department library has already a valuable collection of illustrated scientific works. The working museum contains such zoological collections as are properly the immediate objects of class study.

GYMNASIUM.

The "Dickerson Gymnasium" is a fine roomy building, and the first College gymnasium built in the State, having been opened Nov. 5, 1885. The expense of its construction and equipment was mainly borne by the students, faculty and a few other friends of the College. Mr. F. B. Dickerson, of Detroit, Mich., for whom it was named, made an offer which was the initial step in its erection, and has also aided in providing its equipment, having contributed about one-fourth the entire cost.

The Gymnasium is open for drill from two to three hours each week day in term time. Separate instructors are provided for ladies and gentlemen. The work here done has proved a valuable accessory to the other work of the College, as is shown by the fact of the improved health and physical condition of the students who regularly take gymnasium practice.

SOCIETIES, ETC.

The gentlemen have three well sustained literary societies—the Amphictyon, Alpha Kappa Phi, and the Theadelpic. The ladies have two—the Ladies' Literary Union and the Germanæ Sodales. These societies have separate halls, finished with rare elegance. The Beethoven Society affords excellent opportunities for practice in singing, and has a hall suited to its purpose.

Branches of the Young Men's and the Young Woman's Christian Associations are sustained in the College, and have a hall in which they conduct the weekly prayer meetings.

A society of the Advocates of Christian Fidelity in connection with the College church gladly welcomes all Christian students to its membership.

RELIGIOUS EXERCISES.

All students are required to attend the Chapel exercises daily, and public religious services on the Sabbath at the College Church, or at such other churches as may be selected by parents or students at the opening of the term.

The College Prayer Meeting on Tuesday evening is largely attended, is a source of much good, and the scene of many conversions.

DEPORTMENT AND CLASS WORK.

I. DEPORTMENT—The government of the College is based on those rules of conduct which ought to be observed by young gentlemen and ladies assembled for study. A list of the acts which would be regarded as offenses against such rules would be impracticable. Intellectual and moral culture is held to be the first and paramount object, and whatever is inconsistent with this—such as habitual absence from church and chapel, social visits between students in study hours, students of opposite sex rooming in the same house, idleness, visiting places of questionable amusements or engaging in such amusements in any place, the use of tobacco, wine or intoxicating drinks, or whatever is believed to be hostile to studious habits and formation of a right character, will not be permitted, and if persisted in will cause the student's dismissal.

The hours of recreation are from 3 to 7 P. M. Arrangement for all proper social gatherings or entertainments can easily be made with the President or Lady Principal, and it is expected that it will be so made.

Such rules of conduct, as are here indicated, are plainly consistent and right, and it is believed that they will be cordially observed by all such students as it is desirable to continue in the school.

II. CLASS WORK—(a) Three subjects shall constitute the prescribed work for each student. If a less number be taken it must be by special arrangement with the President or Lady Principal.

(b) More than three subjects may not be taken by any new student unless by express permission of the President or Lady Principal, nor by any member of the College classes unless the student be in undoubted good health, and has averaged a standing of at least $9\frac{1}{4}$ on a scale of 10 in the preceding year.

(c) Studies in the college courses can not be made up out of class except as prescribed by the Faculty. Written notifications, specifying the studies it is desired to make up, must be handed to the President or Lady Principal within the first three weeks of each term.

(d) A record is kept of each student's attainments in recitation and examination, and of his delinquencies. Information concerning the progress and deportment of any student is, upon request, sent to his parent or guardian.

STUDENTS' LECTURE ASSOCIATION.

The association was organized in 1884 by the five literary societies of Hillsdale College. The lecture courses have been successful from the start, and more general satis-

faction has resulted as experience in management and a broader knowledge of the field to select from have developed. The cost of any one of these courses would scarcely secure admission to a single first-class entertainment in many of the larger cities. The very best talent in the lecture field is thus brought within reach of the students of the college, at trifling cost.

SUMMARY OF ATTENDANCE BY DEPARTMENTS, FOR THE YEAR 1889-90.

Academic Department.....	361
Theological Department.....	73
Music Department.....	126
Art Department.....	80
Total.....	640
Number in Theological also in Academic.....	29
Number in Music also in Literary Department.....	46
Number in Art also in other departments.....	50
Names repeated in Art Department.....	14
Deduct names entered more than once.....	139
Number of different names enrolled.....	501

The above summary shows 36 more students in attendance than the previous year. In the literary departments, 230 (56 per cent) of the students whose names appear in the last catalogue, are gentlemen, and 178 (44 per cent) are ladies.

The catalogues of the seventeen years from 1870 to 1886 inclusive, contained the names, on an average, of 125 students in the Commercial and Telegraph Department. That department is now advertised separately.

The large number of students, who, while pursuing studies in one department, avail themselves of instruction in others, forcibly suggests the advantages offered by a school which maintains several departments.

A movement is now on foot to endow a Dunn professorship, and the chair of the President. To the latter fund the trustees have subscribed fifteen thousand dollars.

For further information apply to

ELON G. REYNOLDS, *Secretary*.

REPORT OF THE BOARD OF VISITORS,

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction*:

DEAR SIR—On May 1, 1890, your committee visited Hillsdale College, wherein good work was observed in all departments, under the efficient management of the president, Geo. F. Mosher, sustained by his able faculty.

Throughout the various classes a commendable zest and interest is manifested by both instructors and students, while advanced thought and modern methods indicate the progress that marks all true education.

The varying needs of different students are met by three elective courses, one of three years and two of four; and the fact that the larger number have chosen the longer course, is suggestive of thorough work. A fine senior class comprising over eight per cent of the students is another good feature.

The moral influence underlying the discipline is especially noticeable, as well as the happy, intelligent look of the students.

The apparatus and library are good and judiciously chosen, though gifts in this direction would form a welcome addition.

A free course of eight lectures by prominent men, which the college furnishes, is a good stimulus to literary culture, and the flourishing condition of the five literary societies indicates the interest in this direction, their well furnished halls comparing favorably with the best in the State.

The growth of the various departments is shown by the increasing demand for room, and, if a new building could be added, it would be of great benefit to this institution where character building and education go hand in hand.

W. H. CHEEVER,
RUTH HOPPIN,
MRS. CORA D. MARTIN,
Board of Visitors.

HOPE COLLEGE.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction*:

SIR—By your appointment the undersigned board of visitors to Hope College for the school year 1889-90, beg permission to submit the following report:

Unfortunately the committee, which consisted of Supt. S. T. Morris, of Newaygo; Supt. W. S. Perry, of Ann Arbor; and Mrs. G. A. Osinga, of Otsego, were not able to make any joint visit to the institution, Supt. Perry not being able to attend when the visit was arranged.

The other members made a visit in March, and on a day when they could see the College in its regular work-day garb. They were given every opportunity by Pres. Scott to examine its work in the various departments, and found the work of the institution of a very high order of excellence.

Holland is a quiet, beautiful little village, situated on the Chicago and West Michigan railroad, and on the Ohio and Michigan railroad, twenty-five miles south-west of Grand Rapids nestling closely to Macatawa Bay, with which it is connected to Lake Michigan, thus enjoying excellent land and water communications.

The college grounds consist of eighteen acres of very attractive land, with the surface finely varied by nature, and we doubt whether for beauty, or adaptability to its purposes, can be duplicated by any similar institution in Michigan.

There are at present eight college buildings, though we learn that an ample recitation hall is contemplated, and we trust that some friend of the College shall soon honor himself by furnishing the means for such a building.

The visitors were pleasantly struck with the fine *esprit de corps* of the institution. One heart, one spirit, seems to animate all—President, Faculty and students.

The school year begins on the third Wednesday in September, and continuing through forty weeks, ends with the general commencement, the fourth Wednesday in June.

A noticeable feature of their school order, and one warmly defended by the Faculty, was the absence of lectures or recitations in the afternoon. This arrangement seemed to be entirely agreeable to the students also, who gathered in quite large numbers on the campus, and engaged in field and athletic sports.

We visited exercises in all the departments and found an earnest, studious spirit prevailing everywhere.

Another striking fact in connection with Hope College, is the excellent christian spirit pervading all of her work. We believe, that in proportion

to the number of her graduates, this college has turned out more christian ministers than any other institution in Michigan, and were pleased to learn that all but three of the present college students are christians, and of the seven seniors, six will pursue a course in theology.

While these facts speak highly of christian zeal and earnestness of the President and Faculty it will be seen at a glance that it limits the financial ability of the Alumni.

The College maintains a flourishing Normal 'Department, opened in March, 1888, and which is doing splendid work in fitting young men and women for practical work in the school room.

There is also held at the College a summer Normal of five weeks, under experienced teachers.

The Rev. Jas. F. Zwemer, of Iowa, an enthusiastic young minister, is the financial agent of the College, and the securing of its endowment could not be placed in better hands. Of the \$100,000 proposed to be raised, Mr. Zwemer has already secured \$50,000, and the balance will undoubtedly be in hand in a few months.

On June 25 the College celebrated its twenty-fifth anniversary, with fitting ceremonies.

The Normal Summer School in 1889 had 156 students and we unhesitatingly commend this school to young men and women preparing themselves for the profession of teaching.

The village of Holland has a steady, healthy growth, with a population of 3,000. Seven churches, and an enterprising people, and, with its excellent railroad and steamboat facilities, seems to us a very desirable place to secure an education.

The College council owns and controls a live religious weekly "De Hope," devoted to the interests of the educational institutions of the Reformed church.

Your committee carried away with them from "Hope" very pleasant remembrances of the courtesy of President Scott, the Faculty and students, and especially of the enthusiastic and earnest work done in the classes. Hope College deserves a wide success, which we feel confident she is bound to achieve.

Respectfully submitted,

S. TOMSON MORRIS,

MRS. G. A. OSINGA,

Board of Visitors.

KALAMAZOO COLLEGE.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction*:

SIR—The committee, through your favor appointed to visit Kalamazoo College, respectfully report that by previous arrangement, we met on the 10th day of June, 1890, upon the grounds of the institution, and remained the better part of two days. We inspected the work then in progress in the class rooms, the premises and the appliances at command for doing educational work. Owing to recent troubles in the matter of discipline, we found but a small number of students in attendance, but from careful observation of class-room exercises, we can report great earnestness and fidelity on the part of the staff of instruction, and commendable zeal on the part of the students.

The spirit of the school had evidently suffered from the unfortunate incident referred to, but it is our opinion that the College will not suffer more than a temporary check in consequence of it. There is nothing in the condition of affairs that should discourage the friends of the school, and it is expected that they will rally to its support in such a spirit and in such numbers that the good work done in the past will be carried on with old time enthusiasm. Kalamazoo College has a name and place in the educational work of the State, and we believe it has force and friends enough to recover all that it has lost, and that the sacrifice in which the school was founded and has been maintained will, under the wise management of the Board of Trustees, continue to be a power for good to the church with which its interests are especially united, and to the commonwealth at large.

The curriculum embraces four courses of study, namely, the Classical, the Greek and the Latin Scientific and the English Scientific, the graduates of each course receiving on its completion the corresponding degree.

The Preparatory Department is also a feature of the school, in which the work is arranged to correspond to similar courses in the College proper.

On the College grounds are three fine buildings well adapted for the uses of the school. The Dormitory contains accommodations for a large number of pupils, and has recently been thoroughly repaired and contains, in addition to rooms for students, a library room, well stocked with books, and other literature, the Young Men's Christian Association rooms, and rooms for two literary societies.

Kalamazoo Hall is devoted to purposes of recitation, and contains also the chapel.

The New Ladies' Hall is an attractive, brick structure containing accommodations for the Steward's family, and about thirty young ladies. The rooms are large and beautifully furnished. In this Hall table board is furnished at \$2 per week, and the rooms rent from 75 cents to \$1.00, according to the location in the building. The Hall stands on an elevation and the grove around it is kept in good order, making the temporary home of the young ladies domiciled there as attractive as any one could wish. The establishment is under good supervision and wholesome rules. In fine Kalamazoo College is an institution which takes an intelligent interest in all that pertains to broad scholarship, moral training and physical health.

In conclusion, we would say that your committee were received by the authorities and students of the College with marked cordiality, and no effort was omitted to make their visit a pleasure to them.

Respectfully,

W. M. OSBAND,

B. W. JENKS,

MRS. ALICE W. CLAFLIN,

Board of Visitors.

MICHIGAN FEMALE SEMINARY.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—In accordance with the law of the State of Michigan I herewith present my report of Michigan Female Seminary for the academic year 1889-90:

The faculty consisted of eight regular instructors in the following departments: Latin, French, German, English, Science, Mathematics, Philosophy, History, Literature, Music, Drawing, Painting, Physical Culture, Bible Study. In addition to these teachers non-resident lecturers on special subjects added to the ordinary means of instruction.

The most important gains during the year were in the fitting up of a very well planned and equipped chemical laboratory, and the addition of more than two hundred books to the library which now numbers more than 1,700 volumes.

The department of Physical Training was made strong by the appointment of a special instructor. The Delsarte drill is combined with gymnastic practice, and this exercise is required of students.

The number of students was larger than for several previous years, 66 being enrolled in all departments. The number of graduates was six.

The requirements for admission to the junior or first year class are steadily being raised and thus the work accomplished before graduation is being extended continually.

At present the qualifications for admission as stated in the catalogue are as follows:

All candidates for admission to the Seminary must be able to take thorough examinations in Spelling, English Grammar, Modern Geography and Arithmetic. For admission to the junior class, preparation is also required in Physical Geography, History of the United States to the adoption of the Constitution, Latin Grammar, four books of Cæsar, Algebra, one year's study, or equivalents.

To obtain a diploma students must complete the four years' course of study, outlined in the catalogue as required, together with four years of electives in English, French, German, Latin or Greek. Work in Music or Art is not counted with the other studies for graduation. Special diplomas in Music are granted those who complete a definite course of study and practice on the piano-forte, but these diplomas do not indicate rank in the school. A graduate in Music is not necessarily a graduate of the Seminary.

The general condition of the institution was never more prosperous, and the promise for its future is full of hope.

Respectfully submitted,

ISABELLA G. FRENCH,

Principal.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

SIR—Your committee appointed to visit Michigan Female Seminary respectfully submit the following report.

The school was visited on Friday, May 2, 1890. A most cordial reception was given to the committee and the fullest opportunity afforded to see the working of the Seminary in all its departments, including chapel exercises, class recitations, and the inspection of the building and premises.

The Seminary is pleasantly situated on a hill overlooking the city of Kalamazoo, and seems well adapted to the accommodation of even more than the forty-five young ladies now in attendance. It is a four-story brick building with a wing of wood, and is provided with an elevator.

The school is modeled after Mt. Holyoke Seminary. The pupils board in the building and assist one hour daily in the domestic work of the family. In this they are superintended by a competent matron.

Your committee take pleasure in stating that the instruction given in the classes was of a high order, showing ability on the part of the faculty, accompanied by earnestness on the part of the students. We were impressed with the good spirit prevailing and the evident bond of sympathy between teachers and pupils.

The Seminary is provided with a small but well selected library, and the reading room contains the leading newspapers and magazines for the use of pupils. The Seminary needs a fuller supply of apparatus to illustrate the science work, though some improvements have been made in this direction during the present year. A room for a chemical laboratory was in process of construction at the time of our visit, and will meet a long felt need.

The State and the church under whose care the Seminary is, may well take an active interest in its welfare.

Respectfully submitted,

MARY C. GELSTON,
JOSEPHINE A. WILLIAMS,
HELEN E. PECK,

Board of Visitors.

MICHIGAN MILITARY ACADEMY.

REPORT OF THE SUPERINTENDENT.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—I have the honor to present this, my twelfth annual report of the Michigan Military Academy.

The academic staff for the year 1889-90 was as follows:

Col. J. Sumner Rogers, Superintendent.

William H. Butts, A. M., University of Michigan, Principal, Mathematics.

Thomas Bertrand Bronson, A. M., University of Michigan, Modern Languages.

Delos Dan Jayne, B. S., Cornell University, History and Literature.

William Otis Waters, A. B., Hobart, Greek and Latin.

Irvah L. Winter, A. B., Harvard, History, Rhetoric and Elocution.

Lieut. Frederick T. Van Liew, West Point, 2d U. S. Infantry, Military Science and Tactics.

Earle H. Sargent, M. S., Cornell University, Sciences.

Frederick H. Paine, A. B., Yale, Mathematics and English.

Charles F. Rock, Michigan Military Academy, Tactics and Book-keeping.

The number of cadets enrolled during the year was 181, representing twenty states and territories, and one foreign country. Thirty-five per cent were from Michigan. They were classified in their courses as follows: Preparatory, 41; Latin, 8; Classical, 14; Scientific, 50; Academy, 68.

The graduating class numbered 20, of whom 7 enter college, and two return to the Academy as assistants on the academic and the military staff.

The year has been marked by the finishing of a new academic building, containing three offices, reception room, library, assembly room, and nine recitation rooms. A new water tower and central heating building have been built, and a riding hall 80 feet by 160 feet will soon be ready for use.

Throughout all the buildings gas has been replaced by electric light.

In the military department instruction is now given in infantry, artillery and cavalry tactics, in signaling and fencing, and in saber and Gatling gun practice.

The Academy course, arranged especially for those not intending to go to college, has been lengthened by the addition of a full year's work; but students may be admitted to the University, in the English, B. L., course, after finishing the junior year.

All the courses have been revised to meet the changes in requirements for entrance to the State University, and an opportunity is given at the Academy for advanced work in chemistry, electricity, law, mathematics, English, Latin, French and German.

Very respectfully,

J. SUMNER ROGERS,
Col. M. S. Troops, Superintendent.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

SIR—Your visitors to the Michigan Military Academy at Orchard Lake passed the afternoon of Tuesday, June 10, 1890, at the institution. Mr. E. H. Spoor, of Dowagiac, was unable to accompany us, being absent from the State.

We found the Academy most picturesquely located and environed, on a slight eminence on the east shore of Orchard Lake. Grounds of one hundred acres furnish ample room for military exercises and recreations. The Academy is easy of access from Detroit or Pontiac, and is yet far enough removed from these points to avoid the disturbing influences of city life.

The few recitations which we listened to in the section rooms of the handsome new academic building, seemed to indicate that the Superintendent, Col. J. Sumner Rogers, has secured a corps of very competent and painstaking instructors. There are four courses—the Academy, Scientific, Classical and Latin. The curriculum has a practical leaning, which is commendable, preparing a student for business or professional life or for college. Graduates are admitted to the Michigan University upon their diplomas from this institution.

The number of students enrolled at the time of our visit was about one hundred and fifty. Since the success of the Orchard Lake cadets in the prize drill at Washington in 1887, and their creditable appearance in the Washington Centennial celebration at New York, in 1889, the Academy has come before the notice of the entire country and the enrollment of cadets has increased one-half. The applications being in excess of the number that can be accommodated, the Superintendent is enabled to exercise discrimination in receiving applicants, which has had the effect of greatly improving the morals of the corps of cadets.

The military drill and discipline, which in the opinion of eminent educationists, are of such importance in the formative period of a young man's life, have a thorough exemplification in the Michigan Military Academy. Under the supervision of Lieut. F. T. Van Liew, of the U. S. Army, the cadets take practical instructions in infantry, cavalry and artillery tactics, and their efficiency in the manual of arms is declared by military authorities to be equal to the West Point battalion. The system of vigorous discipline and duties at the national school is closely followed at Orchard Lake, and its results are visible in the manly bearing and physical vigor of the students.

The Michigan Military Academy impressed us as being an institution deserving of the interest and pride of the people of Michigan; and we are able to see how the military training which our young men receive there might prove of great service in a nation like this where the military strength reposes mostly in the citizen soldiery.

JAMES SCHERMERHORN,
J. C. BONTECOU,

Board of Visitors.

OLIVET COLLEGE.

REPORT OF THE PRESIDENT.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

DEAR SIR—I take pleasure in submitting my report for the academical year of 1889-90. I have endeavored to afford all the information the law required and to give such other facts as may help to show the condition of the College.

The corporation of the College comprises twenty-five trustees, and is self-perpetuating. The President of the College is, by virtue of his office, the head of the corporation, and is the organ of communication between the trustees and faculty.

CORPORATION.

Trustees.

Rev. Horatio Q. Butterfield, D. D., President.
Term expires 1890.

Edwin N. Ely, Olivet.

Rev. Charles W. Mallory, Charlotte.

Harvey J. Hollister, Esq., Grand Rapids.

Term expires 1891.

Dexter M. Ferry, Esq., Detroit.

Fitz L. Reed, Esq., Olivet.

Leroy Cahill, Esq., Kalamazoo.

Philo Parsons, Esq., Detroit.

Term expires 1892.

Rev. Wolcott B. Williams, Charlotte.

Rev. Leroy Warren, Olivet.

Rev. A. Hastings Ross, D. D., Port Huron.

Isaac C. Seeley, Esq., Minneapolis, Minn.

Term expires 1893.

Eugene Rutan, Esq., Greenville.

Hon. Henry Fralick, Grand Rapids.

Hon. Jacob S. Farrand, Detroit.

Rev. William H. Davis, Detroit.

Term expires 1894.

Frank S. Belcher, Esq., Charlotte.

Hon. Frank A. Hooker, Charlotte.

David Whitney, Jr., Esq., Detroit.

Wellington W. Cummer, Esq., Cadillac.

Term expires 1895.

Rev. Oramel Hosford, Olivet.

Hon. Asa K. Warren, Olivet.

George W. Radford, Esq., Detroit.

Hon. Alanson Sheley, Detroit.

The annual meeting of the trustees occurs the third Tuesday in June, 8 P. M.

Executive Committee—H. Q. Butterfield, Chairman, A. K. Warren; J. L. Daniels, O. Hosford, F. L. Reed.

Library Committee—H. Q. Butterfield, J. Estabrook, J. L. Daniels.

Secretary and Treasurer—George W. Keyes.

Treasurer—Frank S. Belcher.

Financial Agent—Rev. W. B. Williams.

FACULTY.

Rev. Horatio Q. Butterfield, D. D., President, Drury Professor of Mental and Moral Philosophy.

Rev. Joseph L. Daniels, A. M., Parsons Professor of the Greek Language and Literature.

Stewart Montgomery, A. M., Professor of Chemistry and Physiology.

Rev. Joseph Estabrook, A. M., Professor of Logic and English Literature, and Principal of the Normal Department.

Edwin F. Norton, A. M., Professor of Rhetoric and Modern Languages.

Henry D. Wild, A. B., Rutan Professor of the Latin Language and Literature.

Charles S. Richardson, A. M., Stone Professor of Astronomy and Natural Philosophy, and Instructor in Mathematics.

Frank M. McFarland, Ph. B., Professor of Biology and Geology.

Herman W. Dubee, Professor of Music.

Hamilton King, A. M., Principal of the Preparatory Department, and Instructor in Greek and History.

George N. Ellis, A. M., Instructor in Latin.

Charles McKenny, A. B., B. S., Instructor in English.

Mrs. Aurelia Burrage, Principal of the Ladies' Department, on the Dennis Foundation.

Miss M. Ida Swindt, Instructor in Mathematics.

Ella M. Kedzie, A. B., Instructor in Painting and Drawing.

Miss Anna B. Shepard, Instructor in Vocal Music.

Miss Lizzie Chase Shirley, Teacher of the Piano.

Joseph L. Daniels, A. M., Librarian.

Hamilton King, Registrar.

SUMMARY OF STUDENTS.

Courses.

College—

Classical Course.....	44
Scientific Course.....	33
Literary Course.....	48

— 125

Preparatory—	
Classical Course.....	57
Scientific Course.....	41
Literary Course.....	31
	— 129
Normal and Elective.....	74
Conservatory of Music.....	74
Art.....	48
	— 196
	450
Deduct for names inserted twice.....	122
	—
Total.....	328

GRADUATES AT THE LAST COMMENCEMENT.

Classical Course.....	6
Scientific Course.....	3
Literary Course.....	3
Master of Arts, in course.....	6
Honorary degree of D. D.....	3

COURSES OF STUDY.

COLLEGE.—CLASSICAL COURSE.

Freshman Year.

FALL TERM.

LATIN—Livy. Studies in the Military and Political Antiquities of Rome.
 GREEK—Homer—The Odyssey. Lectures on the Homeric Poems. Greek Prose Composition.
 MATHEMATICS—Algebra completed.
 ORATORY*—Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

WINTER TERM.

LATIN—Horace—Odes. Catullus—Selections. Lectures on Roman Literature.
 GREEK—Selections from Herodotus and Thucydides. Lectures on Greek History. Greek Testament.
 MATHEMATICS—Geometry completed.
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

SPRING TERM.

GREEK—Plato—The Apology and Crito. Greek Testament.
 NATURAL SCIENCE—Botany—Phænogama, with laboratory work.
 MATHEMATICS—Trigonometry—Plane and Spherical.
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

Sophomore Year.

FALL TERM.

LATIN (3 h.)—Terence—Andria. Exercises in Latin Conversation.
 GREEK (2 h.)—Xenophon—Memorabilia.
 ENGLISH—*Rhetoric*.†

* Lessons in the Bible or Greek Testament, and Oratory, weekly throughout the course.

† The subjects printed in italics are elective.

MATHEMATICS—*Analytical Geometry.*
 FRENCH—*Grammar. Chardenal's First French Course.*
 GERMAN—*Grammar. Stern's Studien und Plaudereien, First Series.*
 NATURAL SCIENCE—*Inorganic Chemistry.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

WINTER TERM.

LATIN—Tacitus—Agricola. Pliny—Select Letters. Lectures on Philology.
 ENGLISH—History of English Literature.
 NATURAL SCIENCE—*Inorganic Chemistry. Qualitative Analysis.*
 FRENCH—*Grammar. Sauveur's Causeries. Chardenal's French Exercises.*
 GERMAN—*Grammar. Stern's Studien und Plaudereien, Second Series.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

SPRING TERM.

LATIN—Juvenal—Select Satires. Studies in the Institutions and History of the Roman Empire.
 GREEK—~~Eschylus~~—Prometheus. Lectures on the Greek Drama.
 FRENCH—*Chardenal continued. Knapp's Modern French Prose.*
 GERMAN—*Classics.*
 MATHEMATICS—*Surveying and Field Work.*
 ORATORY—Lectures on Composition and style. Essays, Discussions, Orations and Elocution.

Junior Year.

FALL TERM.

LATIN (2 h.)—Horace—Epistles and Select Satires.
 GREEK (3 h.)—Sophocles.
 GERMAN—*Nathan der Weise—Lessing.*
 FRENCH—*Picciola.*
 ENGLISH—*Study of English Classics—Chaucer, Spenser, Shakespeare, Milton with Lectures.*
 HISTORY—*Ancient and Medieval History.*
 PHYSICS—*Mechanics and Hydrostatics.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

WINTER TERM.

GREEK—Demosthenes—De Corona. Lectures on the Greek Orators and Oratory.
 METAPHYSICS—*Logic.*
 GERMAN—*Herman and Dorothea—Goethe.*
 FRENCH—*La Triade Francaise.*
 PHYSICS—*Pneumatics, Acoustics, Light, Heat, and Electricity.*
 HISTORY—*History of England.*
 NAT. SCIENCE—*Human Anatomy and Physiology, and Hygiene.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

SPRING TERM.

LATIN—Cicero—De Natura Deorum. Lectures on Roman Religion and Mythology.
 GERMAN—*Faust—Goethe.*
 FRENCH—*L'Allemagne—De Staël.*
 PHYSICS—*Astronomy.*
 HISTORY—*History of France and Germany.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

Senior Year.

FALL TERM.

METAPHYSICS—Elements of Intellectual Science.
 ENGLISH—*Study of Later English Authors, with Lectures.*

GREEK—*Sophocles—Edipus Tyrannus. Plato—Phædo. Lectures on Greek Philosophy.*

NAT. SCIENCE—*Geology.*

GREEK—*Lieber on Civil Liberty.*

ORATORY—*Lectures and Exercises in Elocution and Oratory.*

WINTER TERM.

METAPHYSICS—*Elements of Intellectual Science (half term).*

CIVIL POLITY—*Political Economy.*

HISTORY—*Constitutional History of the United States.*

NAT. SCIENCE—*Advanced work in any of the Sciences.*

HEBREW—*Davidson's Grammar (half term).*

ORATORY—*Lectures and Exercises in Elocution and Oratory.*

SPRING TERM.

ETHICS—*Moral Philosophy.*

HEBREW—*Davidson's Grammar continued. Selections from Genesis.*

CHRISTIANITY—*Evidences of Christianity, with Lectures.*

ART—*Outline History, with Lectures on the Principles and Philosophy of Art.*

LATIN—*Lucretius. Lectures on Roman Schools of Philosophy.*

PEDAGOGICS—*Lectures—Development of the Human Faculties. Organization, Grading, and Management of Schools. History of Education.*

ORATORY—*A thesis for graduation.*

Candidates for admission to the Freshman class who have pursued their preparatory studies elsewhere are examined in the following books and subjects, or their equivalents, or must show satisfactory certificates for the same (see pp. 33-35):

Latin Grammar, including Prosody.

Cæsar, two books.

Cicero, seven orations.

Vergil, three Bucolics and six books of the *Æneid*.

Jones' Latin Prose Composition, or equivalent.

Smith's *Smaller History of Greece*, or equivalent.

Leighton's *History of Rome through the Republic*, or equivalent.

Greek Grammar, including Prosody.

Xenophon, *Anabasis*, three books.

Jones' Greek Prose Composition, or equivalent.

*Homer, *Iliad*, two books.

Higher Arithmetic, including the Metric System.

Algebra, through Quadratic Equations.

Plane Geometry.

English Grammar and Geography.

Civil Government and United States History.

All Candidates for advanced standing in this and the following courses are examined in addition to the preparatory studies, in those already pursued by the class, which they propose to enter.

SCIENTIFIC COURSE.

Freshman Year.

FALL TERM.

HISTORY—*Roman History and Geography.*

LATIN—*Cicero. Exercises in Writing.*

MATHEMATICS—*Algebra completed.*

ENGLISH—†*Essays, Discussions and Declamations. Drill in Elocution.*

WINTER TERM.

HISTORY—*Greek History and Geography.*

LATIN—*Cicero. Exercises in Composition.*

* In place of the Homer, the last six books of Vergil's *Æneid*, or an equivalent amount of Latin, will be accepted.

† Lessons in the Bible and English or Oratory, weekly, throughout the course.

MATHEMATICS—Geometry completed.

ENGLISH—Essays, Discussions and Declamations. Drill in Elocution.

SPRING TERM.

LATIN—Cicero. Exercises in Composition.

NATURAL SCIENCE—Botany—Phænogams, with Laboratory work.

MATHEMATICS—Trigonometry—Plane and Spherical.

ENGLISH—Essays, Discussions and Declamations. Drill in Elocution.

Sophomore Year.

FALL TERM.

ENGLISH—Rhetoric.

NATURAL SCIENCE—Inorganic Chemistry.

MATHEMATICS—*Analytical Geometry*.*

FRENCH—Grammar. *Chardenal's First French Course.*

GERMAN—Grammar. *Stern's Studien und Plaudereien, First Series.*

ENGLISH—Essays, Discussions and Declamations. Drill in Elocution.

WINTER TERM.

NAT. SCIENCE—Inorganic Chemistry. Qualitative Analysis. Zoology.

DRAWING (2h.)—*Mechanical Drawing.*

FRENCH—Grammar. *Sauveur's Causeries. Chardenal's French Exercises.*

ENGLISH—*History of English Literature.*

GERMAN—Grammar. *Stern's Studien und Plaudereien, Second Series.*

ENGLISH—Essays, Discussions, Declamations, and Orations. Drill in Elocution.

SPRING TERM.

MATHEMATICS—*Surveying and Field Work.*

NAT. SCIENCE—*Organic Chemistry. Qualitative Analysis, with a Course in the Determination of Minerals.*

NAT. SCIENCE—Zoology. *Advanced Work.*

FRENCH—*Chardenal continued. Knapp's Modern French Prose.*

GERMAN—*Classics.*

ENGLISH—Essays, Discussions, Declamations, and Orations. Drill in Elocution.

Junior Year.

FALL TERM.

PHYSICS—Mechanics and Hydrostatics.

NAT. SCIENCE—Botany—Physiological and Cryptogamic.

ENGLISH—*Study of English Classics Chaucer, Spenser, Shakespeare, Milton, with Lectures.*

GERMAN—*Nathan der Weise—Lessing.*

FRENCH—*Picciola.*

HISTORY—*Ancient and Mediaeval History.*

ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

WINTER TERM.

PHYSICS—Pneumatics, Acoustics, Light, Heat, and Electricity.

NAT. SCIENCE—Human Anatomy and Physiology, and Hygiene.

METAPHYSICS—*Logic.*

GERMAN—*Herman und Dorothea—Goethe.*

FRENCH—*La Triade Francaise.*

HISTORY—*History of England.*

ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

* The subjects printed in italics are elective.

SPRING TERM.

PHYSICS—Astronomy.
GERMAN—*Faust—Goethe.*
FRENCH—*L'Allemagne—De Staël.*
HISTORY—*History of France and Germany.*
ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations and Elocution.

Senior Year.

FALL TERM.

METAPHYSICS—Elements of Intellectual Science.
NAT. SCIENCE—Geology.
CIVIL POLITY—*Lieber on Civil Liberty.*
ENGLISH—*Study of Later English Authors, with Lectures.*
ORATORY—Lectures and Exercises in Elocution and Oratory.

WINTER TERM.

METAPHYSICS—Elements of Intellectual Science (half term).
NAT. SCIENCE—*Advanced Work in any of the Sciences.*
CIVIL POLITY—*Political Economy.*
HISTORY—*Constitutional History of the United States.*
ORATORY—Lectures and Exercises in Elocution and Oratory.

SPRING TERM.

ETHICS—Moral Philosophy.
CHRISTIANITY—Evidences of Christianity, with Lectures.
ART—*Outline History, with Lectures on the Principles and Philosophy of Art.*
PEDAGOGICS—*Lectures—Development of the Human Faculties. Organization, Grading, and Management of Schools. History of Education.*
ORATORY—A Thesis for Graduation.

Candidates for admission to this course must sustain a satisfactory examination in the subjects outlined in the Scientific and Literary Courses, Preparatory Department, or must show satisfactory certificates for the same.

LITERARY COURSE.

Freshman Year.

FALL TERM.

HISTORY—Roman History and Geography.
LATIN—Cicero. Exercises in Writing.
MATHEMATICS—Algebra completed.
ENGLISH*—Essays, Discussions, and Declamations. Drill in Elocution.

WINTER TERM.

HISTORY—Greek History and Geography.
LATIN—Cicero. Exercises in Composition.
MATHEMATICS—Geometry completed.
ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.

SPRING TERM.

LATIN—Cicero. Exercises in Composition.
NAT. SCIENCE—Botany—Phænogams, with Laboratory work.
MATHEMATICS—Trigonometry—Plane and Spherical.
ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.

*Lessons in the Bible and English or Oratory, weekly, throughout the course.

Sophomore Year.

FALL TERM.

ENGLISH—Rhetoric.
 LATIN—Vergil. Reading at sight. Composition.
 FRENCH—*Grammar. Chardenal's First French Course.**
 GERMAN—*Grammar. Stern's Studien und Plaudereien, First Series.*
 MATHEMATICS—*Analytical Geometry.*
 NAT. SCIENCE—*Inorganic Chemistry.*
 ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.

WINTER TERM.

ENGLISH—History of English Literature.
 LATIN—Vergil. Reading at sight. Composition (Poetry into Prose).
 FRENCH—*Grammar, Sauveur's Causeries. Chardenal's French Exercises.*
 NAT. SCIENCE—*Zoölogy.*
 GERMAN—*Grammar. Stern's Studien und Plaudereien, Second Series.*
 NAT. SCIENCE—*Inorganic Chemistry. Qualitative Analysis.*
 ENGLISH—Essays, Discussions, Declamations, and Orations. Drill in Elocution.

SPRING TERM.

LATIN—Vergil. Reading at sight. Reviews.
 FRENCH—*Chardenal continued, Knapp's Modern French Prose.*
 GERMAN—*Classics.*
 NAT. SCIENCE—*Zoölogy—Advanced Work.*
 MATHEMATICS—*Surveying and Field Work.*
 ENGLISH—Essays, Discussions, Declamations, and Orations. Drill in Elocution.

Junior Year.

FALL TERM.

GERMAN—*Nathan der Weise—Lessing.*
 FRENCH—*Picciola.*
 PHYSICS—*Mechanics and Hydrostatics.*
 LATIN—*Livy. Studies in Military and Political Antiquities of Rome.*
 ENGLISH—*Study of English Classics—Chaucer, Spenser, Shakespeare, Milton with Lectures.*
 HISTORY—*Ancient and Mediæval History.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

FALL TERM.

GERMAN—*Herman und Dorothea Goethe.*
 FRENCH—*La Triade Francaise.*
 METAPHYSICS—*Logic.*
 PHYSICS—*Pneumatics, Acoustics, Light, Heat, and Electricity.*
 LATIN—*Horace—Odes. Catullus—Selections. Lectures on Roman Literature.*
 NAT. SCIENCE—*Human Anatomy and Physiology, and Hygiene.*
 HISTORY—*History of England.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

SPRING TERM.

GERMAN—*Faust—Goethe.*
 FRENCH—*L'Allemagne—De Staël.*
 PHYSICS—*Astronomy.*
 LATIN—*Juvenal—Select Satires. Studies in the Institutions and History of the Roman Empire.*
 HISTORY—*History of France and Germany.*
 ORATORY—Lectures on Composition and Style. Essays, Discussions, Orations, and Elocution.

*The subjects printed in italics are elective.

Senior Year.

FALL TERM.

METAPHYSICS—Elements of Intellectual Science.

NAT. SCIENCE—*Geology.*CIVIL POLITY—*Lieber on Civil Liberty.*ENGLISH—*Study of Later English Authors, with Lectures.*

ORATORY—Lectures and Exercises in Elocution and Oratory.

WINTER TERM.

METAPHYSICS—Elements of Intellectual Science, (half term).

CIVIL POLITY—Political Economy.

NAT. SCIENCE—*Advanced Work in any of the Sciences.*HISTORY—*Constitutional History of the United States.*

ORATORY—Lectures and Exercises in Elocution and Oratory.

SPRING TERM.

ETHICS—Moral Philosophy.

CHRISTIANITY—Evidences of Christianity, with Lectures.

ART—*Outline History, with Lectures on the Principles and Philosophy of Art.*LATIN—*Lucretius. Lectures on Roman Schools of Philosophy.*PEDAGOGICS—*Lectures—Development of the Human Faculties. Organization, Grading, and Management of Schools. History of Education.*

ORATORY—A Thesis for Graduation.

Candidates for admission to this department must sustain a satisfactory examination in the subjects outlined in the Scientific and Literary Course, Preparatory Department, or must show satisfactory certificates for the same.

COURSES OF STUDY.

PREPARATORY DEPARTMENT.

Classical Course.

In order to pursue profitably the studies of the Junior Year, students should be well grounded in Modern Geography, the elements of English Grammar, and Arithmetic through Decimal Fractions. A much greater proficiency in English studies is found to be of great advantage.

The completion of the Course of Study prepares the student for any college. It is of the greatest advantage that the student enter the department at the beginning of the course. Emphasis is laid on the requirements in Latin Grammar and Composition, Greek Grammar and Composition, and Roman and Greek History; past experience shows that the candidate is liable to over-estimate his attainments in these subjects. General information must not be regarded as an equivalent for technical scholarship; nor mere translation for systematic drill in the forms and usages of language.

Examinations, conducted in writing, are held in each study once, at least, in each term, and near the close of the year with reference to promotion and graduation. Promotion and graduation are secured only by those who give satisfactory evidence of the requisite proficiency.

Junior Year.

FALL TERM.

ENGLISH—Grammar and Analysis.

LATIN—Grammar and Lessons.

MATHEMATICS—Arithmetic.

ENGLISH*—Spelling, Punctuation, Dictation, and Declamations.

WINTER TERM.

ENGLISH—Grammar and Analysis completed.

LATIN—Grammar and Lessons. Selections from Cæsar. Exercises in Writing.

MATHEMATICS—Arithmetic completed, including the Metric System.

ENGLISH—Spelling, Development of Simple Themes, and Declamations.

*Lessons in the Bible and English, weekly, throughout the course.

SPRING TERM.

HISTORY—History and Geography of the United States.

LATIN—Cæsar. Exercises in Writing.

GOVERNMENT—Civil Government of the United States, with special reference to Michigan.

ENGLISH—Spelling, Essays, and Declamations.

Middle Year.

FALL TERM.

LATIN—Cicero—Selections. Exercises in Writing. Reading at sight.

GREEK—Grammar and Lessons.

MATHEMATICS—Algebra.

ENGLISH—Essays, Written Discussions, and Declamations. Drill in Elocution.

WINTER TERM.

LATIN—Cicero. Exercises in Composition. Reading at sight.

GREEK—Grammar and Lessons.

MATHEMATICS—Algebra through Quadratic Equations.

ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.

SPRING TERM.

LATIN—Cicero. Exercises in Composition. Reading at sight.

GREEK—Grammar and Lessons. Xenophon—Coy's First Reader, forty pages.

MATHEMATICS—Geometry (Plane).

ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.

Senior Year.

FALL TERM.

LATIN—Vergil. Exercises in Composition. Reading at sight.

GREEK—Review of the Lessons. Xenophon—Coy's First Reader completed. Anabasis, Books I, II. Reading at sight (2h.). Composition.

HISTORY (3h.)—Roman History and Geography.

ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.

WINTER TERM.

LATIN—Vergil. Composition (Poetry into Prose). Reading at sight.

GREEK—Xenophon—Anabasis, Books III, IV. Herodotus—Selections. Reading at sight (2 h.). Composition.

HISTORY (3 h.)—Greek History and Geography.

ENGLISH—Essays, Discussions, Declamations and Orations. Drill in Elocution.

SPRING TERM.

LATIN—Vergil. Reading at sight. Reviews.

GREEK—Homer—Iliad, two books. Selections from Attic Prose. Reading at sight (2 h.) Reviews.

ENGLISH—A Thesis for Graduation.

SCIENTIFIC AND LITERARY COURSE.

Junior Year.

FALL TERM.

ENGLISH—Grammar and Analysis. Penmanship.

MATHEMATICS—Arithmetic.

GEOGRAPHY—Political Geography.

ENGLISH*—Spelling, Punctuation, Dictation and Declamations.

WINTER TERM.

ENGLISH—Grammar and Analysis completed.

MATHEMATICS—Arithmetic completed, including the Metric System. Book-keeping†

ENGLISH—Spelling, Development of Simple Themes and Declamations.

* Lessons in the Bible, and English, weekly, throughout the course.

† Art may be substituted for this by the ladies.

SPRING TERM.

HISTORY—History and Geography of the United States.
GOVERNMENT—Civil Government of the United States, with special reference to Michigan.
DRAWING—Free-Hand and Geometrical Drawing.
ENGLISH—Spelling, Essays and Declamations.

Senior Year.

FALL TERM.

LATIN—Grammar and Lessons.
MATHEMATICS—Algebra.
NAT. SCIENCE—Physical Geography.
ENGLISH—Essays, Written Discussions, and Declamations. Drill in Elocution.

WINTER TERM.

LATIN—Grammar and Lessons. Selections from Caesar. Exercises in Writing.
MATHEMATICS—Algebra through Quadratic Equations.
PHYSICS—Natural Philosophy (Elementary).
ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.

SPRING TERM.

LATIN—Caesar. Exercises in Writing.
MATHEMATICS—Geometry (Plane).
NAT. SCIENCE—Physiology and Hygiene (Elementary).
ENGLISH—Essays, Discussions, and Declamations. Drill in Elocution.
 All candidates for advanced standing in these courses are examined in studies already pursued by the class they propose to enter.

ENGLISH COURSE.

The course of instruction in this department is designed to impart a thorough knowledge of the common and higher branches of an English education. Students are prepared for the best scientific schools, by substituting Latin or French, as required, for equivalent studies. Students who honorably complete the first three years may receive a certificate for presentation to scientific schools. The preparation required for admission is indicated by the "Course of Study" following. The studies of the third and fourth years are not pursued as elementary studies.

The College is provided with apparatus for illustrating the principles of Natural Philosophy and Astronomy, and instruction is given in its use. It has also a valuable set of instruments for Practical Surveying and Civil Engineering. The Laboratory is fitted with desks and apparatus for practical work by the students, both in General Chemistry and in Chemical Analysis.

FIRST YEAR.

FALL TERM—English Grammar. Arithmetic. Geography. Penmanship. *English—Spelling, Punctuation, Dictation, and Declamations.
WINTER TERM—English Grammar and Analysis. Arithmetic. Book-keeping. English—Spelling, Development of Simple Themes, and Declamations.
SPRING TERM—History of the United States. Civil Government. Drawing. English—Spelling, Essays and Declamations.

SECOND YEAR.

FALL TERM—Physical Geography. Rhetoric. Algebra. English—Essays, Written Discussions, Declamations, and Drill in Elocution.
WINTER TERM—Natural Philosophy. Zoology. Algebra. Vocal Music. English—Essays, Discussions, Declamations, and Drill in Elocution.
SPRING TERM—Geometry. Physiology. Botany. English—Essays, Discussions, Declamations, and Drill in Elocution.

THIRD YEAR.

FALL TERM—Algebra. Botany. Chemistry. English—Essays, Discussions, Declamations, and Drill in Elocution.

* Lessons in the Bible and English, weekly, throughout the course.

WINTER TERM—Geometry. English Literature. † *Chemistry. Anatomy and Physiology.* English—Essays, Discussions, Declamations, Orations, and Drill in Elocution.
 SPRING TERM—Logic. *Trigonometry. Chemistry. Advanced Methods.* English—Essays, Discussions, Declamations, Orations, and Drill in Elocution.

FOURTH YEAR.

FALL TERM—*Analytical Geometry. History. Geology. Mental Philosophy. French. German.* Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

WINTER TERM—*History. Geology. Mental Philosophy. Political Economy. French. German.* Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

SPRING TERM—*Astronomy. History. Art. Surveying. French. German.* Oratory—Essays, Discussions, Declamations, and Elocution.

NORMAL COURSES.

English Course.

FIRST YEAR.

FALL TERM—English Grammar. Arithmetic. Geography. Penmanship. Methods—Elementary Sounds, Primary Reading and Language Lessons. *English—Spelling, Punctuation, Dictation and Declamations.

WINTER TERM—English Grammar and Analysis. Arithmetic. Book-keeping. English—Spelling, Development of Simple Themes, and Declamations.

SPRING TERM—History of the United States. Civil Government. Drawing. English—Spelling, Essays and Declamations.

SECOND YEAR.

FALL TERM—Algebra. Physical Geography. Rhetoric. Vocal Music. Methods—Class Work. English—Essays, Written Discussions, Declamations, and Drill in Elocution.

WINTER TERM—Algebra. Natural Philosophy. Zoology. English—Essays, Discussions, Declamations, and Drill in Elocution.

SPRING TERM—Geometry. Physiology. Botany. English—Essays, Discussions, Declamations, and Drill in Elocution.

THIRD YEAR.

FALL TERM—Algebra. Methods—School Organization, Grading, and Management. † *Chemistry. German. Latin.* English—Essays, Discussions, Declamations, and Drill in Elocution.

WINTER TERM—*Geometry. Chemistry. English Literature. German. Latin.* English—Essays, Discussions, Declamations, and Drill in Elocution.

SPRING TERM—*Logic. German. Latin. Chemistry.* Methods—Development of the Human Faculties; Organization, Grading, and Management of Schools, and History of Education. English—Essays, Discussions, Declamations, and Drill in Elocution.

LANGUAGE COURSE.

FIRST YEAR.

FALL TERM—English Grammar. Arithmetic. Geography. Penmanship. Methods—Elementary Sounds, Primary Reading, and Language Lessons. *English—Spelling, Punctuation, Dictation, and Declamations.

WINTER TERM—English Grammar and Analysis. Arithmetic. Book-keeping. English—Spelling, Development of Simple Themes, and Declamations.

SPRING TERM—History of the United States. Civil Government. Drawing. English—Spelling, Essays, and Declamations.

† The subjects printed in italics are elective.

* Lessons in the Bible, and English or Oratory, weekly, throughout the course.

SECOND YEAR.

FALL TERM—Algebra. Latin. Methods—Class Work. English—Essays, Written Discussions, Declamations, and Drill in Elocution.

WINTER TERM—Algebra. Latin. Vocal Music. English—Essays, Discussions, Declamations, and Drill in Elocution.

SPRING TERM—Geometry. Physiology. Latin. English—Essays, Discussions, Declamations, and Drill in Elocution.

THIRD YEAR.

FALL TERM—Algebra. Methods—School Organization, Grading, and Management. **Latin. French. Greek. German.* English—Essays, Discussions, Declamations, and Drill in Elocution.

WINTER TERM—Geometry. *Latin. French. Greek. German.* English—Essays, Discussions, Declamations, Orations, and Drill in Elocution.

SPRING TERM—Botany. *Latin. French. Greek. German.* English—Essays, Discussions, Declamations, Orations, and Drill in Elocution.

FOURTH YEAR.

FALL TERM—*Latin. Greek. Roman History. Geology. Rhetoric. Mental Philosophy.* Oratory—Lectures on Composition and Style, Essays, Discussions, Orations and Elocution.

WINTER TERM—*Latin. Greek. Greek History. Chemistry. English Literature. Mental Philosophy.* Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

SPRING TERM—*Latin. Greek. Art. Chemistry. Moral Philosophy.* Methods—Development of the Human Faculties; Organization, Grading, and Management of Schools, and History of Education. Oratory—Lectures on Composition and Style, Essays, Discussions, Orations, and Elocution.

The professional instruction in Reading and Elocution, and the reviews in the common branches, will be conducted by the Principal of the Normal Department. The advanced studies will be pursued under the instruction of the College Professors in their respective departments.

A class will be organized in the Fall and Spring terms for the benefit of those about to teach. It will last half the term.

Those who complete any of the full courses will receive a Normal Certificate.

THE ART DEPARTMENT

Has been for several years under the efficient direction of Ella M. Kedzie, A. B. Her course in Art leads to advanced work in that line and is meant to fit the student for certain studies in science. It is the object of this department to develop in the student's mind a correct idea of form, as well as an appreciation of the beautiful; also to train the powers of observation until the students are capable of working independently from life and sketching from nature.

A thorough understanding of the principles of drawing is followed by the study of form from simple models and casts, afterward studies in still life, sketching from nature, and the study of the human form. The following will give an idea of the work pursued:

Pencil Drawing is free to all students for one term of twenty-four lessons. This comprises the fundamental principles of drawing, working from the flat, followed by the study of form or extension, from simple objects, models, and casts.

Mechanical Drawing is free to all students for one term of twenty-four lessons.

Charcoal Drawing includes drawing from the cast and still life studies. A good assortment of casts of leaves, fruit, fragments of the human form, etc., has been provided for this work.

Crayon Drawing—Finished pictures and crayon portraits.

China Painting embraces the decorating of porcelain, vases, tiles, etc., in mineral colors. Gilding is also done. A portable kiln has been provided for the firing of porcelain.

Oil and Water Colors—Studies in still life, landscapes, flowers, figures, etc.

* The subjects printed in italics are elective.

Students wishing to make Art a specialty can have instruction and the use of the Art Room and models, daily.

A term's work comprises twenty-four lessons, each two hours long.

THE OLIVET CONSERVATORY OF MUSIC

Was under the care of Prof. H. W. Dubee as Director, assisted by Miss Anna B. Shepard, instructor in vocal music and Miss Lizzie C. Shivley, teacher of the organ and the piano.

This school offers the finest advantages for the study of music—instrumental, vocal, and theoretical—either exclusively or with other studies. The methods of instruction are similar to those of the best conservatories in this country and Europe. The courses of study are comprehensive and thorough, being arranged with a view to maintain a high standard of musical taste. The aim of the management is to secure a complete mastery of all branches which are undertaken by the student, rather than to give a superficial knowledge of a few pieces. A real education of the musical faculties is accomplished, rather than a training in styles which are to be blindly imitated by the pupil.

Four courses of study are offered.

1. A course in piano, harmony, and musical composition.
2. A course in pipe organ, harmony, and musical composition.
3. A course in vocal music, harmony, and musical composition.
4. A course combining work belonging to the three preceding courses.

A full course will take between four and five years. Talented students, with diligence, may finish it in four years.

Being connected with the College, a double advantage is given the student for musical and mental improvement, and it is the aim of the management to encourage and urge the musical student to such studies as English literature, rhetoric, modern languages, and history.

THE PIANOFORTE.

In the study of this instrument great attention is given to every detail of technique. Especial care is taken to develop a true musical touch and an expressive style of playing.

Preparatory Course (One Year).

Studies in Position, Tension, Motion and Touch. Lebert and Stark's Method—Zwitscher's and Plaids's Technical Studies. Easy Etudes by Bertini, Koehler, Loeschhorn. Easy Sonatinas and Pieces by Clementi, Kuhlau, Reinecke, Lichner, Meister, etc. Major and Minor Scales in slow practice.

Collegiate Course.

FIRST GRADE.

Zwitscher's and Plaids's Technical Studies. Major Scales. First Introduction of Arpeggios. Etudes by Czerny, Loeschhorn, Bertini, Schmidt. Sonatinas by Clementi, Kuhlau. Easy Pieces. Tone. Accent. Expression. Memorizing. Sight Reading.

SECOND GRADE.

Five-finger Exercises. Minor Scales. Arpeggios. Etudes by Loeschhorn, Koehler, Bertini, Czerny, Heller. Sonatinas and Sonatas by Kuhlau, Haydn, Reinecke. Modern Pieces. Memorizing. Sight Reading. Vocal Accompaniments.

THIRD GRADE.

Scale Review for higher Velocity and Power. Grand Arpeggios. Trill Exercises. Zwitscher's, Mason's, and Plaids's Technical Studies. Etudes by Loeschhorn, Koehler, Czerny, Heller, Schmidt. Bach's Inventions. Bach's Well-Tempered Clavichord. Sonatas by Haydn, Mozart. Mendelssohn's Songs Without Words. Modern Pieces. Reading of Score in Oratorio Choruses. Song Accompaniments. Memorizing. Phrasing.

FOURTH GRADE.

Double Thirds and Sixths. Dominant Seventh Arpeggios. Scale Reviews. Etudes

by Heller, Loeschhorn, Cramer, Jensen, Bach. Clementi's *Gradus ad Parnassum*. Sonatas by Haydn, Mozart, and Beethoven. Smaller Pieces by Schumann, Mendelssohn, Raff, Chopin, Schubert, etc. Song and Chorus Accompaniments. Transpositions. Sight Reading.

FIFTH GRADE.

Scales in Double Thirds and Sixths. Kullack's Octave School. Tausig's Technical Studies. Etudes by Cramer, Loeschhorn, Moscheles. Sonatas by Mozart, Beethoven, Schubert, Hummel. Fantasias, Waltzes, etc., by Mendelssohn, Schubert, Raff, Chopin, Schumann, etc. Memorizing. Accompaniments.

SIXTH GRADE.

Tausig's Daily Studies. Kullack's Octave Studies. Review of Scales in all different forms. Bach's French and English Suites. Bach's Preludes and Fugues. Studies by Heller, Moscheles, Chopin, Haendel, Henselt. Sonatas by Beethoven, Schubert, Weber and Scarlatti. Concertos by Field, Mozart. Concert Selections by Mendelssohn, Weber, Raff, Dupont, Rubinstein, Mills, Thalberg, Heller, etc. Concert Playing.

SEVENTH GRADE.

Daily Technique. Kullack's Octave Studies. Tausig's Daily Studies. Etudes by Chopin, Henselt, Rubinstein. Bach's Well-Tempered Clavichord. Bach's Fugues. Sonatas and Concertos by Mendelssohn, Weber, Beethoven, Hummel, Brahms, Liszt, etc. Grand Compositions by Beethoven, Hummel, Rubinstein, Chopin, Schumann, St. Saens, Tausig, Liszt, Brahms, etc. Classification of Works. Critical Analysis of Composition. Essays on Music. Methods of Teaching.

THE PIPE ORGAN.

Students desiring to study the Pipe Organ should have finished at least the third grade of Piano Playing (see page 60).

A very complete Pipe Organ of two manuals, and two and a quarter octaves of pedals, furnishes an opportunity for practice such as is rarely to be obtained at any price, even in the largest cities. In the lessons in Organ Playing, particular attention is given to the study of obligato pedal playing, Registration, Church Service in all forms, Choir Accompaniment, and Concert Music, with special attention to the works of Bach and Mendelssohn. Pupils, when advanced, are afforded practical experience in accompanying the Choir in Chorus and Quartette.

FIRST GRADE.

Text-books: Ritter's and Rink's Organ Schools; Pedal Studies by D. Buck, Thayer; Preludes, Fugues, and easier pieces by Buck, Mendelssohn, Merkel, Guilmant, etc.; Accompaniment for Solo and Chorus Playing.

SECOND GRADE.

Pedal Studies by Buck, Schneider, etc. Best Arrangements from the Scores of the Great Masters. Sonatas by Bach, Mendelssohn, Merkel. Preludes. Extempore Playing. Accompaniments. Registration. Selections by Lemmens, Guilmant, Batiste, etc.

THIRD GRADE.

Toepfer's Organ Studies. Bach's Preludes, Fugues, and Toccatas. Haendel's Concertos. Merkel's Sonatas. Selections from Bach, Haendel, Mendelssohn, Hesse, Buck, Widor, etc. Church Playing—accompanying Solo, Choir, and Chorus.

FOURTH GRADE.

Buck's Fugues, Trios, Sonatas and Passaglia. Rheinberger's Sonatas. Concert Studies and Pieces by Bach, Haendel, Buck, Rheinberger, Best, St. Saens, etc. Structure of the Organ. Choir Accompaniment. Chorus Accompaniment.

CULTIVATION OF THE VOICE.

The aim of this department is to acquire a mastery over the production and management of sound in singing.

Especial attention is given to a healthy and skillful management of the breath; the production of a clear, full, and resonant tone, free from the throat; distinct enunciation, the art of phrasing correctly, and the development of a refined musical taste.

COURSE OF INSTRUCTION.

GRADE I—Lessons in Breathing. Emission of Voice in Tone Production. Blending of Registers. Intervals. Trill and Diatonic Scale in slow movement. Easy Studies and Solfeggios. Easy Songs and Ballads. Sight Reading.

GRADE II—Study of Major and Minor Intervals with and without Portamento. Arpeggios. Chromatic Scale in slow movement. Major and Minor Scales. Exercises, Legato and Staccato. Progressive Studies and Solfeggios. English Songs and Ballads. Sacred Music. Sight Reading.

GRADE III—Major, Minor and Chromatic Scales in more rapid movement. Development of Voice by use of Arpeggios. Sustainuto. More difficult Solfeggios. Art of Phrasing. Songs of moderate difficulty from classic writers. Sacred Music. Sight Reading.

GRADE IV—Continuation of Scale Study. Embellishments. Advanced Exercises and Solfeggios. Phrasing, Songs from German, French, and Italian composers. Difficult Songs from Classic Writers. Selections from Oratorios. Sight Reading.

THEORY OF MUSIC AND COMPOSITION.

This study should be undertaken as early as possible, as by a knowledge of it much time may be saved in the practice of vocal and instrumental music. A practical application of each principle is made immediately upon its presentation. Theory thus becomes of great value to the student in subsequent study, a knowledge of it insuring facility in reading at sight. The course of study requires three years.

The text-books used are Emery's "Elements of Harmony," Richter's "Harmony," Richter's "Treatise on Counterpoint," and Berlioz's "Instrumentation."

HISTORY OF MUSIC.

A series of lectures on this subject will be given every year by the Director. The text-book used is the "History of Music," by Langhaus.

DIPLOMAS AND CERTIFICATES.

A diploma will be given:

1. For the completion of the Piano Course, with Harmony, Counterpoint, and History of Music.
2. For the completion of the full course for Pipe Organ, with Harmony, Counterpoint, and History of Music.
3. For the completion of the Vocal Course, with Piano (two years), Harmony (two years), and History of Music.

A certificate will be given for the completion of the third year of the full course.

LITERARY REQUIREMENTS.

Candidates for graduation are required to pass examination in the following studies, or their equivalents: Algebra to the amount of two terms' work in the College; German, three terms; French, two terms; Rhetoric, one term; Acoustics, Art, English Literature, one term; and Evidences of Christianity. They are also required to attend College Rhetorical Classes during three years of their course in the Conservatory.

Transient students in the Conservatory are recommended to elect one study each term in one of the College courses.

Free tuition is granted in *one study* each term, in any of the College courses, to every musical student who pays not less than \$24.00 for tuition in the Conservatory.

Some things which were foreshadowed a year ago are now solid realities.

The Adelphic Hall, a description of which was given in my last report, was finished and dedicated Wednesday of commencement week. Rev. M. A. Bullock, of Iowa City, Ia., class of 1876, delivered the oration. At the beginning of this academical year the society had the satisfaction of moving into their new quarters.

The Phi Alpha Pi Society, a description of whose proposed hall appeared in last year's report, laid the corner stone upon the same day. Rev. J. F. Loba, D. D., of Kalamazoo, class of 1873, formerly professor in the College, gave the oration. The building is now inclosed, and is to be finished in season for dedication next commencement.

Burrage Hall for the library, a description of which was copied into my last report, was finished and dedicated last commencement day. A large audience assembled to hear the Rev. John H. Barrows, D. D., of Chicago, class of 1867, who delivered the oration on the occasion. At the close of the services the audience adjourned to the library, and the Building Committee, through Pres. Butterfield, formally delivered the keys to the Librarian, Prof. J. L. Daniels, who made fitting response. Three portraits were then unveiled; one of the late Capt. Leonard Burrage, of N. Leominster, Mass., who gave \$20,000 toward the building; one, of the late Mrs. Lucy E. Tuttle, of Guilford, Conn., who gave \$15,000 to endow the library; and one of Willie Sage Tuttle, her son, who died at the age of thirteen, and in whose memory the library received its endowment. The library is now a finished whole, and fully meets the wants of the institution. The structure will afford all the space needed for books for years to come, while the endowment is ample for the library's growth. The present number of volumes is 18,000, besides nearly the same number of pamphlets. From one thousand to twelve hundred volumes are added yearly.

As soon as the books left Parsons' Hall, the space vacated was used for two recitation rooms. This released from service two other recitation rooms in the same hall, and these furnished the much needed space for the Art Department.

The removal of the Adelpic Society to their new hall left a vacant room, which became admirable quarters for the Y. M. C. A. Thus the building of these two halls has given enlargement and relief to more than one department of the institution. During the year a little over \$27,000 has been added to the College funds. Of this \$20,000 came from the estate of the late Cornelius B. Erwin, Esq., of New Britain, Conn. There is reason to expect a larger sum from the same source.

The number of students exceeded that of 1888-9 by fifty-one.

The currents of this increasing prosperity showed themselves at the beginning of the present academical year. It has been estimated that the College has increased in the worth of its buildings 175 per cent in the last six years; 200 per cent in its equipment for work in the last five years; 25 per cent in its teaching force in the last four years; 36 per cent in the number of its students in all departments in the last two years; and 43 per cent in the number of students in the College proper in one year.

Our Assistant Treasurer and Secretary, E. I. Thompson, Esq., will send you the financial statement required.

Very respectfully yours,

HORATIO Q. BUTTERFIELD,

President.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

SIR—The committee appointed to visit Olivet College submit the following report.

On the 9th and 10th days of May, 1890, the committee personally attended class exercises in all branches, both in the college proper, and in the preparatory department, so far as time allowed. The fullest liberty was given by the instructors to ask questions and to test the knowledge and advancement of the students by personal interrogation, and the committee exercised this liberty freely.

In the department of language your committee observed with pleasure that the "Inductive" method is employed, especially with beginners, and with admirable results. The college is in no respect behind the age in the methods of instruction in both ancient and modern languages.

In the departments of chemistry, biology, botany and natural history the college has excellent appliances for laboratory work, and there is ample evidence that first class work is being done by instructors and students. The students handle all the tools and make personal investigation in all these branches, which is the only true road to success in the natural sciences.

The department of physics and manual training seems not to have received as much attention as the others, and a less generous outfit. It is to be hoped that this deficiency will soon be remedied.

Recitation of the senior classes in the most advanced branches of the college curriculum gave evidence of careful instruction on the part of the faculty, and of maturity and discrimination of thought and investigation by the students.

The college has been specially fortunate in securing funds for the construction of buildings. A new library building with admirable appointments, is ready to receive the large, well-selected and growing library. Two commodious and elegant buildings for the accommodation of the college literary societies are in process of construction. The funds for the erection of these were secured by the students themselves, without any draft on the college treasury.

A beginning has been made in the matter of physical training and gymnastics for the young lady students. It is to be hoped that this will grow into a permanent and well-endowed part of the college. It gives your committee great pleasure to state that the moral standard of the college and students seems in no respect to have declined, with an increase of prosperity, and we cordially commend Olivet College to the citizens of this and neighboring states as a safe and desirable place for the higher education of their sons and daughters.

E. P. CHURCH,
T. L. EVANS,
Board of Visitors.

RAISIN VALLEY SEMINARY.

REPORT OF THE BOARD OF VISITORS.

HON. JOSEPH ESTABROOK, *Superintendent of Public Instruction:*

Following your letter of instruction, your committee went to Adrian Thursday evening and spent Friday the 20th, in visiting the classes and inspecting the work at Raisin Valley Seminary.

We find the school in a prosperous condition under Principal Hathaway's management. The present attendance is about forty students but was nearly twice that in the winter.

Three courses of study are offered beside the preparatory. Three teachers are employed.

The work done by Professor Hathaway is excellent but that done by the other teachers lacks somewhat in that animation and enthusiasm that characterizes successful school work.

The work in history is particularly good, in English and mathematics fair. In Latin the English pronunciation is used and the students do not show that familiarity with Latin Grammar and Latin idiom that could be desired. The work in German is better.

No opportunity is offered students in physics or chemistry for conducting experiments for themselves. This detracts from the efficiency of that work.

There is a limited supply of physical apparatus and a small reference library.

The general discipline of the school is good, although there is a laxity in that regard in the recitations of the assistant teachers. Recesses were given and the usual disorder accompanying such intermissions was noticeable.

The school is pleasantly situated and the students seem interested in their work. We think the school worthy of the patronage it seems to receive.

All of which is respectfully submitted.

C. E. SMITH, *Chairman.*
W. H. FRENCH.
JENNIE MCLAUGHLIN.

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FIFTH BIENNIAL REPORT

OF THE

STATE BOARD OF EDUCATION

OF THE

STATE OF MICHIGAN

FROM

JUNE 30, 1888, TO JUNE 30, 1890.



BY AUTHORITY.

LANSING, MICH.:
ROBERT SMITH & CO., STATE PRINTERS AND BINDERS.
1890.

REPORT.

To the Honorable, The Legislature of the State of Michigan:

In accordance with the requirements of Section 10, Act 194 of the Public Acts of 1889, we hand you our report for the two years ending June 30, 1890.

You are aware of the change in the membership of the Board caused by the retirement of Hon. Bela W. Jenks, who was for so long a time its respected president, and whose faithful services to the State cannot be too highly commended; and the election of the Hon. Perry F. Powers to succeed him.

Act 194 of the laws of 1889 changed somewhat the duties of the Board, and we have, we trust, fully met all its requirements.

STATE NORMAL SCHOOL

An examination of the report of the principal of the school, herewith submitted, will give you full information concerning the school so far as the same has been under his immediate direction and control.

We heartily endorse the recommendations he has made, and trust the Legislature will give them careful consideration and place the means in our hands with which to carry them out.

The report of the Treasurer of the Board, also herewith submitted, will fully inform you as to the moneys received and expended. We also submit an estimate of the amount of money required for the running expenses of the school during the next two years. This estimate has been made after careful consideration, and we think that not a dollar has been asked for that is not absolutely needed.

We also append to our report an inventory of the property belonging to the school.

Four vacancies have occurred in the faculty since our last report: Miss Helen M. Post, assistant in the grammar and French departments Mr. Willis A. Weeks, assistant in Latin and French, and Mrs. Lydia E. Kniss, instructor in history, resigned their respective situations. Miss Amelia Hale, instructor in mathematics, was removed by death.

The following new teachers have been employed: Miss Helen B. Muir, assistant in Latin and Greek; Miss Nina C. Vandewalker, critic in primary grades; Miss Lillian Crawford, teacher in model primary; Miss Mary Lockwood, kindergartner; Miss Ella M. Hayes, instructor in mathematics and Miss Nellie M. Stirling, instructor in history.

The additions provided for by the Legislature of 1887 have been occupied during the last two years, and have furnished the additional room which was so much needed.

The Board have inaugurated the system of free text-books in the school and the results of such action are highly gratifying.

The training school has been greatly enlarged and improved. A kindergarten department has been added, and has been fully equipped. It is in charge of an experienced and competent kindergartner, and the results already attained prove the wisdom of our action.

A model primary school as a department of observation has been established, and has proved a great advantage to the students of the Normal School.

BOARD OF VISITORS.

In compliance with the provisions of law relative thereto, we appointed for the year 1888-9, Rev. Theodore Nelson, LL. D., of Saginaw City; Superintendent C. T. Grawn, of Traverse City, and Mrs. Mary Fairbank of Flint, visitors to the school.

For the year 1889-90, we appointed Prof. Orr Schurtz, of Charlotte, Prof. H. C. Rankin of Lapeer, and C. C. Hopkins of Lansing visitors to the school.

The reports of these Boards will be found embodied in the reports of the Superintendent of Public Instruction for the respective years, to which we invite your attention.

STATE CERTIFICATES.

We have held during the past two years four examinations of applicants for State certificates, and have licensed the following named persons, they having passed the examination in all the subjects required by the Board.

Geo. S. Hughes, R. H. Gully, Aurora Wetherbee, Jno. J. Daly, A. Mc Lellan, Silas B. Tobey, Geo. W. Haan.

Prior to the taking effect of the law of 1889 above referred to and subsequent to our last report, the following persons were granted certificates upon theses:

Nina C. Vandewalker, Jas. Warnock, Jr., Julia F. Stoughton, Emma Lamb, Hamilton King.

The law was changed by the last Legislature so as to make all certificates good for life, and abolishing all fees theretofore required of applicants.

The following is a copy of the circular prepared and sent by us to those who apply for examination.

STATE OF MICHIGAN.
STATE BOARD OF EDUCATION. }
-----18-----

State certificates will be granted to teachers of approved qualifications, in accordance with Section 15 of Act No. 194, Laws of 1889, which reads as follows:

"The State Board of Education shall hold at least two meetings each year, at which they shall examine teachers, and shall grant certificates to such as have taught in the schools of the State at least two years, and who shall, upon a thorough and critical examination in every study required for such certificate, be found to possess eminent scholarship, ability, and good moral character. Such certificate shall be signed by the members of said board, and impressed with its seal, and shall entitle the holder to teach in any of the public schools of this State without further examination, and shall be valid for life unless revoked by said board. No certificate shall be granted except upon the examination herein prescribed:

"*Provided*, That graduates of the literary and scientific departments of the University, and of incorporated colleges of the State, shall not be required to teach as a preliminary to taking such examination and certificate."

The State Board of Education, in order to carry into effect the provision of this law, will require of each applicant for a certificate:

1. Written testimonials from responsible persons as to the moral character of the applicant;

2. Testimonials from present or former employers as to success in teaching;

3. A statement by the applicant, of the length of time he has taught;

4. Each applicant to pass a satisfactory examination in orthography, reading, penmanship, arithmetic, algebra, geometry, grammar, geography, United States history, general history, civil government, theory and art of teaching, physics, physiology and hygiene, botany, zoology, geology, chemistry, rhetoric, general literature, and the school law of Michigan.

Applications should be made at least ten days before the first day of the examination. The length of the examination will be five days. The next examination will be held at the capitol in Lansing, beginning at 2 o'clock p. m., and closing on

All communications should be addressed to the Secretary of the Board, Lansing, Michigan.

As will be seen from an examination of the circular, we make an exception in favor of those who are graduates from the University and Colleges of this State.

The Boards of visitors to the other schools of the State, required by law to be appointed by the Superintendent of Public Instruction and approved by this Board have all been selected with care, and almost without exception, have done good and conscientious work for the State.

In attending to the matters which the law makes it obligatory upon us to look after, we have endeavored to merit the approval of the people of the State, and sincerely trust that when your scrutiny of our work is completed we shall have your approval also.

Very respectfully yours,

JAMES M. BALLOU, *President.*

JOSEPH ESTABROOK, *Secretary.*

SAMUEL S. BABCOCK, *Treasurer.*

PERRY F. POWERS.

REPORT OF THE PRINCIPAL

FOR THE SCHOOL YEARS 1888-89 AND 1889-90.

To the State Board of Education:

GENTLEMEN—In compliance with law and custom, I present herewith the following report of the State Normal School for two years as noted above. These have been years of marked prosperity, covering a period of good progress along several lines. I gladly bear testimony to the ability, earnestness, fidelity and skill of the corps of instructors. As to the students, it is not easy to speak too highly of their faithfulness, good order, good sense and professional zeal.

Herewith, I present tables showing the facts of membership, etc., for the period reported upon and offering comparisons with preceding years. It will be seen that I am again able to report an increase in the normal department (exclusive of the training school), of nearly one hundred over the enrollment for the last year included in the biennial report made two years ago. It is also shown that the enrollment for 1889-90 is two hundred and fifty-five per cent of that reported ten years ago.

Such an increase in numbers is encouraging and most gratifying, but I believe this report will exhibit other indications of progress in the right direction which will be valued still more highly, as criteria of genuine advancement and real success.

SUMMARY OF ENROLLMENT FOR FIVE YEARS.

1885-86.		1888-89.	
Normal department.....	628	Normal department.....	809
Training school:		Training school:	
Primary grades.....	136	Kindergarten.....	31
Grammar grades.....	106	Primary grades.....	94
	242	Grammar grades.....	145
			270
Total, excluding transfers.....	870	Total, excluding transfers.....	1,079
1886-87.		1889-90.	
Normal department.....	675	Normal department.....	811
Training school:		Training school:	
Primary grades.....	135	Kindergarten.....	48
Grammar grades.....	109	Model primary.....	47
	244	Intermediate grades.....	91
		Grammar grades.....	96
Total, excluding transfers.....	919		284
1887-88.		Total, excluding transfers.....	1,095
Normal department.....	714		
Training school:			
Primary grades.....	143		
Grammar grades.....	91		
	234		
Total, excluding transfers.....	948		

NUMBER OF GRADUATES FOR FIVE YEARS.

1886	90	1889	104
1887	99	1890	114
1888	118		
		Total for five years	525

YEARLY ENROLLMENT IN NORMAL DEPARTMENT FOR TEN YEARS.

1880-81	318	1885-86	628
1881-82	330	1886-87	675
1882-83	398	1887-88	714
1883-84	475	1888-89	809
1884-85	579	1889-90	811

IN MEMORIAM.

During the school year 1888-89, an honored teacher, Miss Amelia Hale, was called from her earthly labors. I desire to make here some record of the love and profound respect in which she was held by her co-laborers in the faculty, by the students of this institution and indeed by all who knew her. She was born in Williamston, Michigan, April 20, 1863. She was graduated from the high school in her native village in 1880; she entered the normal school, as a student, in the autumn of 1882; was graduated with the class of 1885; and in view of her especial proficiency in mathematical studies and of her great promise as a teacher, received immediate appointment as instructor in the mathematical department. Here she did most acceptable work until the end of the school year, 1888-89, when her failing health compelled retirement from the corps. During the whole of the last year of her service she wrought under weakness and pain that would have conquered a less heroic soul. In the summer of 1889, she went home to die. Her calmness, patience and sweet resignation surpassed description and were above all praise.

She died at her home in Williamston on January 2, 1890.

On February 18, 1890, solemn and impressive services were held in memory of her in the Normal Chapel.

BUILDINGS AND GROUNDS.

The buildings completed and occupied during the last two years are found to be thoroughly convenient and large enough for our present needs and they are throughout in excellent repair.

We could, however, make good use of some additions to our grounds. Our present campus is now so much occupied by buildings that we lack sufficient space for play and exercise ground. A large proportion of our students are sons and daughters of farmers, accustomed to abundant out-door exercise, and there ought to be provided for them plenty of room for that open-air activity which is so conducive to bodily health and mental vigor. The space in the vicinity of the school is being rapidly filled up with residences and boarding houses and I strongly recommend that steps be taken to secure land for the purpose named above, while it can be purchased at a moderate cost. I feel reasonably certain that if the State would contribute from four to five thousand dollars for this purpose the citizens of Ypsilanti would do as much, and the required ground could be secured.

FREE TEXT-BOOKS.

Since the last biennial report the system inaugurated by the board, of loaning text-books to students without cost to them, has been successfully and happily carried out. No students in the State are more worthy of this assistance and none could be more gratefully appreciative of it. Nine out of ten of them earn their own money by the hardest effort and this help is a real and most grateful relief to them.

THE SCHOOL OF TRAINING AND OBSERVATION.

During the last two years the value and efficiency of this department so essential to a normal school have been vastly increased. All recommendations made two years ago have been favorably considered and adopted by your honorable board. We have now the services of two additional teachers, as follows:

1. A model primary teacher who gives model instruction and exemplifies model management and also supervises and criticises the work of pupil teachers while they are temporarily in charge of the model primary room.

2. A kindergartner employed throughout the entire school year. She has charge of the kindergarten, gives instruction in its methods, philosophy, and history and devotes especial attention to the adaptation of kindergarten methods to the needs of the primary grades.

For both of these positions most excellent selections have been made, and the normal school corps has been strengthened by these additions to it.

The suggestion made in the last report concerning two sessions for the school of training and observation and the allowance of additional time in the senior year of each of the courses of study have been provided for and will go into effect at the beginning of the next school year, September, 1890.

The outlook for this department is most encouraging. If it does not make great advances in usefulness and reputation, it will be our fault who have its administration in charge, since every recommendation looking to its improvement has been allowed and adopted. It is in excellent condition and doing its most important work with great earnestness and power.

COURSES OF STUDY.

The general scheme of courses of study adopted during the last school year and ordered to go into immediate effect, deserve especial attention. The three and four years' courses are not materially changed in their contents and amount, but superior flexibility and facility of adaptation to various needs have been secured by offering, in each, a considerable amount of elective work. A brief professional course for college graduates and an advanced six years' course leading to the degree of Bachelor of Pedagogics have also been established. A more detailed account of all the courses is given in the appendix to this report.

Heretofore there have been only two English four-years' courses—the literary and the scientific. Of these, the first was almost exclusively literary and historical, and the second ignored literature and history and was almost purely scientific and mathematical. Therefore, any student desiring a strong English course was compelled to take an unsymmetrical body of work. We gave him a choice between two kinds of mental

distortion, but insisted that he should take one or the other. The allowance last year of an elective year added to the three years' English course afforded a grateful, though partial, relief. The adoption of the scheme set forth above thoroughly remedies this unwholesome condition of affairs. It allows each student to employ his time upon such studies as are most advantageous to him, knowing that he will not be defeated of graduation provided he has satisfactorily completed the prescribed amount of work, including all required studies.

THE RELATIONS OF THE NORMAL TO THE HIGH SCHOOLS.

It is impossible for the Normal School to supply more than a very small proportion of the academic instruction required to equip the army of teachers now needed by the public schools of Michigan. This academic preparation belongs in the main to the excellent high schools which are the pride of our system. The Normal school can rightfully be expected to do two things:

1. To provide the best possible academic instruction in all the various branches pertaining to the public schools. This the law requires in plain terms; and it enables the school to instruct academically, those who come from parts of the State where there are no high schools within reach, and also to supplement the high school courses with more advanced study than they are able to offer. In this way the Normal School is able to equip its graduates with that proper margin of knowledge which ought always to exist between that which an instructor is called upon to teach and the outside limits of his own attainments.

2. To give thorough professional training and instruction to all who are properly prepared, in the subject matters of the branches to be taught, to receive it.

To the high schools rightfully belongs the academic instruction of the teachers required in the State, so far as they are able to give it. It is right that the Normal School supplement their work with more advanced study than they can usually offer, and take care of those whom they cannot reach, and, for the rest, confine itself to professional work.

This statement exhibits the close relations that ought to obtain between the Normal School and the high schools. The high schools have an allotted part in the preparation of teachers. They conduct their pupils through certain courses of study. The Normal School performs the same service for those whom the high schools cannot reach; then takes both of these classes of pupils and rounds out and enlarges their academic acquirements; and then gives to both the professional training and instruction that is needed to make teachers of competent scholars.

Your recent action in receiving graduates upon diploma and giving full credit for what the proper high school officer certifies they have completed, seems to me to be a just and reasonable acknowledgment of the proper function of the high school. It is also wise and fair that, in our final certificate given to graduates, the schools which have, in certain branches, certified them to us, should be named, in order that such schools may have both the credit and the responsibility of their work.

It would be well if all high school students would complete their courses and come to us as graduates, but in many instances undergraduates apply for admission with the full consent and approval of their teachers.

ADMISSION WITHOUT EXAMINATION.

Your recent action in granting the admission of high school graduates to the Normal School without examination and in crediting them with the full value of work completed in such high schools, as certified by the proper authorities is, in my judgment, just and reasonable. The Normal School should by no means seek to deplete and weaken its high school allies by any inducements offered to undergraduates, but when such undergraduates do come to us, I believe it would be well and proper to deal with their certified standings exactly as we do with those presented by graduates; our relations with the high schools ought to be very close, friendly, and mutually helpful. We ought to trust them for the satisfactory performance of the work which in the nature of the case belongs to them.

Our sole aim is to advance the interests and enhance the value of the public schools of our great commonwealth, by preparing and sending out into all grades, from the most elementary to the highest, strong, earnest, and well-trained teachers. It is impossible for us to furnish anything like an adequate supply of teachers so equipped, so long as we insist upon doing over again, after the high schools, a large part of their academic work. We should trust them for what they do. Their excellent reputation, extending far beyond the limits of the State, fully justifies us in so doing. Many of them can equal us in quality of their academic instruction and the sooner we realize this fact the better for the schools of Michigan.

In this connection allow me to express the hope that the day is not far distant when we shall do more than we have yet been able to do to advance the excellence of the rural schools. Graduates of even our shorter courses, readily command places in the graded schools at higher salaries than the district schools can pay. Can we not devise a plan by which we can give at least some professional instruction to teachers who will still remain in these schools. These schools need trained teachers: can we not supply them? Here is the starting point for educational reform. Is it not possible with suitable permissive legislation, to make it an object for young men and women holding third grade certificates to come to the Normal School and take brief professional courses, covering say, six months or a year of time?

I commend this subject to your earnest consideration; it is worthy of careful thought. The changes recently wrought in the policy of the Normal School bring it, nearer than ever before, to the common schools of the State; and I hope that a way will be found to bring it still closer to them at the point where help is most sorely needed.

THE LIBRARY.

The library every year is becoming better and better suited to meet the needs of the school. During the time here reported upon, large and very valuable additions have been made, amounting to more than two thousand well selected volumes, the present number on the shelves being nearly eleven thousand volumes.

SUMMARY.

During the two prosperous years herein reported upon, the attendance has been much larger than ever before. Extraordinarily large

additions have been made to the library; a model primary school and the kindergarten have been opened and successfully operated; the system of free text-books has been adopted and established; the former courses of study have been thoroughly revised, and greatly liberalized by the allowance of elective studies; advanced courses, equal in extent to college courses, have been provided and the degree of bachelor of pedagogics awarded to those who worthily complete them, and a plan of dealing more reasonably and liberally with graduates of high schools has been adopted and put in practice.

All this is most respectfully submitted,

JOHN M. B. SILL,
Principal.

APPENDIX TO REPORT OF THE PRINCIPAL.

DETAILS OF THE COURSE OF STUDY.

Notes. 1. Four daily studies pursued for forty weeks (one hundred and sixty weeks of work) constitute the regular work for one school year. The satisfactory completion of four hundred and eighty weeks of such work (three years) makes up the amount necessary for the completion of either of the two courses leading to a certificate or license to teach in the public schools of Michigan, good for five years; and six hundred and forty weeks of such work are required for the completion of any of the courses (four years) leading to a diploma and a life certificate.

2. It will be seen that in all the courses certain studies are "required," and certain others are elective, that is to say, chosen by the student with the advice and consent of the principal.

3. The "satisfactory completion" of any study is to be understood as follows:

(a.) A record earned in the study by regular class work, or else by examination, if the study be Arithmetic, Grammar, Geography, Spelling, Reading and Orthoëpy, Civil Government, History of the United States, or the Effects upon the Human System of Stimulants and Narcotics.

(b.) A record earned as above, or by the presentation of approved standing, so far as other studies are concerned.

The following list names all studies offered in the three and four years' courses and shows the number of weeks of study regularly allotted to each. It is called

LIST A,

Of studies offered in the three and four years' courses, showing also the number of weeks which each study regularly occupies.

Art and Manual Training.

	Weeks.
1 Penmanship	10
2 Drawing	20
3 Advanced Drawing	20

Civics.

4 Civil Government	10
5 Political Science	10

English.

6 Reading and Orthoëpy, Teachers' Academic Review	10
7 Grammar, Teachers' Academic Review	10
8 Rhetoric	20
9 English Literature	20
10 Advanced English Literature	10
11 American Literature	20
12 Old and Middle English	20
13 Study of Masterpieces	20

History.

14 U. S. History	20
15 U. S. History and Civil Government, Teachers' Academic Review	10
16 General History	20
17 Grecian and Roman History	20
18 English Constitutional History	20
19 United States Constitutional History	20

Languages, Ancient.

20	Latin, 1st Term.....	20
21	" 2d ".....	20
22	" 3d ".....	20
23	" 4th ".....	20
24	" 5th ".....	20
25	" 6th ".....	20
26	" 7th ".....	20
27	" 8th ".....	20
28	Greek, 1st Term.....	20
29	" 2d ".....	20
30	" 3d ".....	20
31	" 4th ".....	20

Languages, Modern.

32	French, 1st Term.....	20
33	" 2d ".....	20
34	" 3d ".....	20
35	" 4th ".....	20
36	" 5th ".....	20
37	German, 1st Term.....	20
38	" 2d ".....	20
39	" 3d ".....	20
40	" 4th ".....	20
41	" 5th ".....	20
42	" 6th ".....	20
43	" 7th ".....	20

Mathematics.

44	Book-keeping.....	10
45	Arithmetic, Teachers' Academic Review.....	10
46	Algebra I.....	20
47	Algebra II.....	20
48	Plane Geometry.....	20
49	Solid Geometry.....	20
50	Higher Algebra.....	20
51	Trigonometry.....	10
52	Surveying.....	10

Music.

53	Vocal Music.....	20
54	Advanced Vocal Music.....	20
55	Voice Culture I.....	20
56	" " II.....	20
57	" " III.....	20
58	" " IV.....	20
59	Harmony.....	20
60	Advanced Harmony.....	20
61	Musical Composition.....	20
62	History and Literature of Music.....	20
63	Solo Singing I.....	20
64	Solo Singing II.....	20
65	Conducting, etc.....	20

Natural Sciences.

66	Physiology and Hygiene.....	20
67	Botany.....	20
68	Zoology.....	10
69	Comparative Zoology.....	10
70	Geology.....	20
71	Geography, Teachers' Academic Review.....	10

Physical Sciences.

72	Physics.....	20
73	Advanced Physics.....	20
74	Chemistry.....	20
75	Advanced Chemistry.....	10
76	Astronomy.....	10
77	Instrumental Astronomy.....	10

Professional Studies and Exercises.

78	Psychology.....	20
79	Psychology Applied.....	20
80	Professional Training in Arithmetic.....	5
81	" " Geography.....	5
82	" " Grammar.....	5
83	" " Reading.....	5
84	History of Education.....	10
85	Physical Technics.....	10
86	Training in Physical Science.....	10
87	Biological Laboratory Practice.....	10
88	Practice teaching.....	20
89	" ".....	10
90	" ".....	10
91	" ".....	20
92	Kindergarten instruction and methods.....	20
93	Senior Rhetoricals.....	--

NOTE ON LIST A.—Studies 54, 56, 57, 58 and 60-65, inclusive, are excluded from studies to be credited in making up a course, except when the student is pursuing the Music Course. Studies 86 and 87 are interchangeable in all courses. Work in any ancient or modern language is not credited in making up the amount due in any course until a record in such language covering at least three terms, has been earned.

The following studies from list A are required in all the courses, except as noted. The numbers refer to corresponding numbers in list A:

1, Penmanship; 2, Drawing, except in the Music Course; 4, Civil Government; 6, Reading and Orthoepey; 7, Grammar; 8, Rhetoric; 14, U. S. History; 15, Review of History and Civil Government; 16, General History, except in the Ancient Classical and the Modern Classical Course; 45, Arithmetic; 46, 47, and 48, Algebra I and II, and Plane Geometry, except in the Music Course; 66, Physiology, Hygiene, etc.; 71, Geography; 72, Physics; 78, Psychology; 79, Psychology applied, except in the course for a five years' certificate, the Modern Classical and the Music Course; 80, 81, 82, and 83, Professional Instruction in Common Branches; 84, History of Education, except in the courses named above, after 79; 86, Training in Physical Science, except in the Music Course; 88 and 89, Practice Teaching; 90 and 91, Practice Teaching, except in Ancient Classical, and the Modern Classical Course.

The three years' courses, leading to a certificate (or license to teach) good for five years, are named and constituted as follows:

1. *Course for a five years' certificate*—Required studies as shown above and 120 weeks of elective studies from list A.

2. *Kindergarten Course*—Required studies as shown above; Vocal Music (53), Zoology (68), Solid Geometry (49), Kindergarten Instruction and Methods (92), and 70 weeks of elective studies from list A.

The four years' courses, leading to a diploma and a life certificate, are named and constituted as follows:

1. *Literary and Scientific Course*—Required studies as shown above and 250 weeks of elective studies from list A.

2. *The Literary Course*—Required studies as shown above; English Literature (9), Political Science (5), Grecian and Roman History (17), Advanced English Literature (10), American Literature (11), Old and Middle English (12), Study of Masterpieces (13), English Constitutional History (18), American Constitutional History (19), and 100 weeks of studies elected from list A.

3. *The Scientific Course*—Required studies as shown above; Advanced Drawing (3), Zoology (68), Comparative Zoology (69), Botany (67), Chemistry (74), Advanced Physics (73), Geology (70), Physical Technics (85), Astronomy (76), Solid Geometry (49), Higher Algebra (50), Trigonometry (51), and 50 weeks of elective studies from list A.

4. *The Ancient Classical Course*—Required studies as shown above; Latin (20-27), Greek (28-31), Grecian and Roman History (17), and 40 weeks of elective studies from list A.

5. *The Modern Classical Course*—Required studies as shown above; German and French (32-43) and 40 weeks of elected studies from list A.

6. *The English Latin Course*—Required studies as shown above; Latin (20-27), Grecian and Roman History (17) and 90 weeks of studies elected from list A.

7. *The English German Course*—Required studies as shown above; German (37-43), and 110 weeks of studies elected from list A.

8. *English French Course*—Required studies as shown above; French (32-36), and 150 weeks of studies elected from list A.

9. *The Music Course*—Required studies as shown above; Music Studies (53-65), and 130 weeks of studies elected from list A.

NOTES ON THE FOREGOING COURSES—1. In the choice of elective studies, regard must be had to the schedule of daily exercises. That is, the choice of such studies may be limited, in certain instances, by the possibilities of the schedule. It will sometimes happen that a desired elective study cannot be taken on account of conflict with another elective, or with some required study.

2. The choice of elective studies must also be made with due regard to suitable and necessary sequences. No study may be selected until the student is prepared for it by adequate knowledge of whatever necessarily precedes it. Professional training in any one of the common branches is to be preceded by a record earned in such branch, and also by 10 weeks in Psychology.

In the synopsis of the courses given above, studies No. 5, 9-13, 18 and 19, aggregating 140 weeks, are noted as required studies in the *Literary Course*, and studies No. 3, 49-51, 67-70, 73-76 and 85, aggregating 200 weeks, are noted as required studies in the *Scientific Course*, but in either of these courses 20 weeks of elective studies will be accepted in place of 20 weeks of the studies named in this paragraph as required studies.

ADVANCED COURSES.

The following advanced courses lead to a life certificate and to a diploma carrying with it the honors of the degree of Bachelor of Pedagogics:

I. The recently established

PROFESSIONAL COURSE FOR GRADUATES OF COLLEGES.

	Weeks.
1 Mental Science Applied to Teaching.....	20
2 Professional Training in Common Branches.....	20
3 History of Education.....	10
4 Practice Teaching and Supervision.....	20
5 Lectures on Principles and Methods.....	10

NOTE.—The requirements for admission to this course are as follows: (1) The presentation of a diploma showing that the applicant holds the degree of A. B., B. S., B. L., or B. Ph. from the University of Michigan or from an incorporated college in Michigan. (2) The applicant must also pass a satisfactory examination in the academic phases of the common branches, as follows: Orthography and Spelling, Geography, Grammar, Arithmetic, History of United States, Civil Government, and that part of Physiology and Hygiene that has special reference to the effects of alcoholic drinks, stimulants and narcotics upon the human system.

The requirement for graduation is the satisfactory completion of the foregoing course after a residence of at least 20 weeks at the Normal School.

This course leads to the degree of Bachelor of Pedagogics, and to a life license to teach.

2. Advanced Courses now for the first time offered. These cover 960 weeks of work selected from list A (see page 13), and from list B.

LIST B.

Additional Studies Offered to Students in Advanced Courses. (See above.)

	Weeks.
94 Advanced Psychology.....	10
95 Discussions and Comparisons of Educational Systems and Theories.....	10
96 Advanced Practice Teaching and Supervision.....	20
97 Entomology.....	20
98 Sanitary Science (Lectures).....	10
99 Meteorology.....	10
100 General Geometry, or Calculus.....	20
101 Advanced Rhetoric.....	20
102 Latin, 9th Term.....	20
103 " 10th ".....	20
104 " 11th ".....	20
105 " 12th ".....	20
106 Greek, 5th Term.....	20
107 " 6th ".....	20
108 " 7th ".....	20
109 " 8th ".....	20
110 Studies in German and French Literature.....	20

The specifications for the completion of these advanced courses are as follows:

1. For those who have completed either of the three years' courses, 480 weeks of additional work selected from the studies named in lists A and B.

2. For those who have completed any one of the four years' courses, 320 weeks of additional work, selected as shown under 1 above.

3. Provided in all cases that among the studies so selected shall be numbers 79 and 84 of List A, and numbers 94, 95, 96, and 98 of List B, unless a record has already been earned in them.

The degree of Master of Pedagogics is obtainable upon the following conditions:

Any person holding the degree of Bachelor of Pedagogics of the Michigan State Normal School, may upon application receive the degree of Master of Pedagogics upon the following conditions:

1. He shall furnish evidence satisfactory to the State Board of Education that he has been engaged in teaching or in school supervision continuously and with pronounced success for five years since receiving the Bachelor's degree.

2. He shall prepare and present a thesis acceptable to the said Board of Education, upon some subject connected with the History, Science, or Art, of Education: the Board reserving the right to assign the subject of such thesis.

TREASURER'S REPORT.

State Board of Education:

GENTLEMEN—I have the honor to hand you herewith my report as Treasurer of your board for the fiscal years ending respectively June 30, 1889, and June, 30, 1890.

Exhibits A and B are statements of all amounts received by me and the sources from which the different amounts were derived during these years.

Exhibits C and D are statements in detail of every expenditure made during the two years for all purposes. The voucher numbers given refer to duplicate vouchers, one set of which is on file in the office of the Auditor General, the other in my office. The set in my office is of course the property of the Board, subject at all times to its inspection and control.

Exhibits E and F are detailed statements of salary account for the two years.

Exhibits G and H are tabular statements of the account of the State of Michigan with me during these years, and are made from the quarterly audits of my accounts by the Auditor General.

The several balances reported are deposited in the bank approved by you.

Very respectfully yours,
S. S. BABCOCK,
Treasurer.

EXHIBIT A.

S. S. BABCOCK, TREASURER.—DR.

FOR FISCAL YEAR ENDING JUNE 30, 1899.

I.—On Account of Current Expense.

Date.	Of Whom Received.	Amount.	
1898. July 1.....	To balance on hand.....		\$255 08
I.—Legislative Appropriation.			
Aug. 1.....	To part of State Treasurer's check No. 31,064.....	\$8,908 00	
Dec. 9.....	32,646.....	9,894 00	
1899. Feb. 2.....	" " " 33,623.....	9,544 50	
May 24.....	" " " 35,641.....	10,775 00	39,121 50
II.—Normal School Interest Fund.			
1898. Aug. 1.....	To part of State Treasurer's check No. 31,064.....	\$1,092 00	
Dec. 9.....	32,646.....	1,014 00	
1899. Feb. 2.....	" " " 33,623.....	965 50	
May 24.....	" " " 35,641.....	1,225 00	4,296 50
III.—Admission Fees.			
1898. Sept. 30.....	Frances L. Stewart, clerk.....	\$2,100 00	
Nov. 30.....	" ".....	190 00	
Dec. 31.....	" ".....	129 50	
1899. March 30.....	" ".....	2,150 00	
June 28.....	" ".....	50 50	4,620 00
IV.—Laboratory Fees.			
June 3.....	Frances L. Stewart, clerk.....	143 00	
June 28.....	" ".....	1 50	143 50
V.—Diploma Fees.			
June 28.....	Frances L. Stewart, clerk.....		300 00
VI.—Organ Fees.			
June 3.....	Frances L. Stewart, clerk.....	\$28 00	
June 28.....	" ".....	10 00	38 00
VII.—Interest on Deposits.			
1898. Dec. 7.....	Wayne County Savings Bank.....	\$128 96	
1899. June 3.....	" ".....	37 72	221 68
VIII.—Loans.			
1898. Dec. 31.....	S. S. Babcock.....		148 72
1899. June 30.....	Total receipts, including balances on hand.....		\$49,129 98
	Balance overdrawn to new account.....		1,500 56
	Total debits (current expense).....		\$50,630 54

STATE BOARD OF EDUCATION.

EXHIBIT A.—CONTINUED.

II.—On Account of Building and Special Purposes.

Date.	Of Whom Received.	Amount.	
I.—Building Additions.			
1888.			
July 1.....	Balance on hand.....	\$7,681 13	
Sept. 4.....	Part State Treasurer's check No. 31,443.....	5,825 00	\$13,506 13
II.—Heating Apparatus.			
July 1.....	Balance on hand.....		3,025 00
III.—Seating and Furnishing.			
Aug. 1.....	Part of State Treasurer's check No. 31,064.....	\$4,175 00	
Dec. 31.....	Transferred from heating apparatus.....	310 45	
Dec. 31.....	" " building additions.....	21 02	4,506 47
IV.—Library.			
July 1.....	Balance on hand.....	\$823 25	
Sept. 20.....	Transfers from current expense.....	500 00	
1889.			
June 29.....	" " ".....	1,500 00	2,823 25
Total debits (building and special purposes).....			\$23,860 85
Deduct transfers.....			2,331 47
Total less transfers (building and special purposes).....			\$21,529 38
Current expense.....		\$50,630 54	
Building and special purposes.....		21,529 88	
Total debits for all purposes.....			\$72,159 92

EXHIBIT B.

S. S. BABCOCK, TREASURER.—DR.

FOR FISCAL YEAR ENDING JUNE 30, 1890.

I.—On Account of Current Expenses.

Date.	Of Whom Received.	Amount.	
I.—Legislative Appropriation.			
1889.			
July 15.....	Part of State Treasurer's check No. 36,487.....	\$8,967 00	
Oct. 8.....	" " " " 37,618.....	15,563 50	
1890.			
Jan. 30.....	" " " " 39,347.....	10,462 50	
May 2.....	" " " " 40,735.....	10,462 50	
June 30.....	" " " " 41,556.....	10,462 50	\$53,918 00
II.—Normal School Interest Fund.			
1889.			
July 15.....	Part of State Treasurer's check No. 36,487.....	\$1,033 00	
Oct. 8.....	" " " " 37,618.....	1,030 89	
1890.			
Jan. 30.....	" " " " 39,347.....	958 00	
May 2.....	" " " " 40,735.....	1,179 50	
June 30.....	" " " " 41,556.....	1,059 00	5,260 19
III.—Admission Fees.			
1889.			
Sept. 30.....	Frances L. Stewart, clerk.....	\$2,000 00	
Dec. 13.....	" " " ".....	164 00	
Dec. 31.....	" " " ".....	101 00	
1890.			
Feb. 15.....	" " " ".....	2,095 00	

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EXHIBIT B.—CONTINUED.

Date.	Of Whom Received.	Amount.	
1890.			
April 3.....	Frances L. Stewart, clerk.....	\$237 50	
June 30.....	.....	124 50	\$4,712 00
	IV.—Laboratory Fees.		
1889.			
Dec. 12.....	Frances L. Stewart, clerk.....	\$56 00	
Dec. 31.....	.....	4 00	
1890.			
Feb. 15.....	" ".....	120 00	
April 3.....	" ".....	25 00	
May 8.....	" ".....	11 50	
June 30.....	" ".....	1 50	218 00
	V.—Diploma Fees.		
1889.			
Dec. 31.....	Frances L. Stewart, clerk.....	\$9 00	
1890.			
Feb. 15.....	" ".....	6 00	
April 3.....	" ".....	3 00	
June 30.....	" ".....	300 00	318 00
	VI.—Interest on Balances.		
1889.			
Dec. 2.....	Wayne County Savings Bank.....	\$101 00	
1890.			
June 2.....	" ".....	82 81	188 81
	VII.—Pianos and Organ.		
1889.			
Feb. 15.....	Frances L. Stewart, clerk.....	\$9 00	
April 3.....	" ".....	5 40	
June 30.....	" ".....	12 00	26 40
	Total debits (current expenses).....		\$64,636 40

II.—On Account of Building and Special Purposes.

Date.	Of Whom Received.	Amount.	
	I.—Building Additions.		
1889.			
July 1.....	Balance on hand.....		\$2 14
	II.—Library.		
July 1.....	Balance on hand.....	\$1,476 89	
1890.			
March 31.....	Transferred from current expense.....	1,500 00	2,976 89
	Total.....		\$2,979 08
	Deduct transfers.....		1,500 00
	Total, less transfers (building and special purposes).....		\$1,479 08
	Current expenses.....	\$64,636 40	
	Building and special purposes.....	1,479 08	
	Total for all purposes.....		\$66,115 48

RECAPITULATION.—DR.

Current expense for 1888-1889.....	\$50,680 54	
" " 1889-1890.....	64,636 40	\$115,266 94
Building additions, etc., for 1888-1889.....	\$21,529 38	
" " 1889-1890.....	1,479 08	23,008 41
Total for all purposes for two years.....		\$138,275 35

STATE BOARD OF EDUCATION.

EXHIBIT C.

S. S. BABCOCK, TREASURER.—CR.

FOR FISCAL YEAR ENDING JUNE 30, 1899.

I.—Current Expense.

Date.	No. of Voucher	Payee.	For What Object.	Amount.
1898.				
July 12	256	By Detroit Evening Journal	Advert'g bids for fuel	\$7 56
12	257	Evening News Association	"	11 76
12	258	F. R. Cleary	Engrossing diplomas	25 00
Aug. 1	259	C. A. Strellinger & Co.	Museum	58
1	260	Mich. Bell Telephone Co.	Rent of telephone	12 00
1	261	Ypsilanti post office	Postage	25 00
1	262	Ypsilanti Gas Co.	Lights	26 80
1	263	John Bibb	Extra labor	10 50
1	264	Pay roll for July	Salaries	220 00
24	265	Homer Briggs	Freight and express	14 53
24	266	Tel. & Telephone Const. Co.	Use of state line	1 05
24	267	W. H. Sweet	Ribbons for diplo. as	21 75
24	268	Ypsilanti post office	Postage	10 00
24	269	August Muller	Repairing pianos	75 00
24	270	T. S. & J. D. Negus	Apparatus	80 65
31	271	Pay roll for August	Salaries	220 50
Sept. 20	272	The Richmond & Backus Co.	Supplies	10 50
20	274	F. K. Bexford & Sons	Fuel	2,554 37
20	275	"	Repairs	2 50
20	276	J. M. B. Sill	Contingent	13 70
20	277	"	Extra labor	87 12
20	278	Austin George	Repairs	10 00
20	279	Henry J. Green	Apparatus	50 60
20	280	Pay roll for September	Salaries	3,557 00
Oct. 13	281	Detroit Electrical Works	Apparatus	40 53
13	282	Coe Bros.	Printing	26 60
13	283	Smith & Osband	"	49 30
30	284	Pay roll for October	Salaries	3,557 00
Nov. 1	285	James W. Queen & Co.	Apparatus	52 15
1	286	Educational Supply Co.	"	15 09
30	287	Mich. Bell Telephone Co.	Rent of telephone	12 00
30	288	Pay Roll for November	Salaries	3,557 00
30	289	Mich. Bell Telephone Co.	Use of state line	3 00
30	290	Ypsilanti Gas Co.	Lights	45 80
30	291	"	"	22 80
30	292	Boyce & Co.	Museum	4 00
Dec. 14	293	Moore & Stewart	Supplies	5 04
14	294	Ypsilanti post office	Postage	10 00
14	295	C. W. Rogers	Supplies	2 90
14	296	Coe Bros.	"	11 50
14	297	Smith & Osband	"	13 00
14	298	Peninsular Paper Co.	"	16 40
14	299	J. M. B. Sill	Extra labor	11 00
14	300	C. M. Martin	Repairs	8 43
14	301	Nina C. Vandewalker	Supplies	26 62
14	302	Ypsilanti Gas Co.	Lights	45 00
14	303	J. M. B. Sill	Freight and express	15 62
14	304	Frank Smith	Supplies	64 53
14	305	James M. Southwick	Museum	4 45
14	306	James W. Queen & Co.	Apparatus	19 31
14	307	Homer Briggs	Freight and express	25 66
31	308	Pay roll for December	Salaries	3,557 00
31	309	Coe Bros.	Contingent	93 15
31	310	W. C. Stevens	Supplies	47 61
31	311	The Richmond & Backus Co.	"	15 08
31	312	Walter Hewitt	Tuning piano & organ	6 00
31	312½	F. P. Bogardus	Insurance	636 00
31	313	C. King & Son	Contingent	2 90
31	314	Mich. Bell Telephone Co.	Use of state line	1 75
31	315	Tel. & Telephone Const. Co.	Rent of telephone	12 00
		Carried forward		\$19,086 71

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EXHIBIT C.—CONTINUED.

Date.	No. of Voucher	Payee.	For What Object.	Amount.	
		Brought forward.....		\$19,086 71	
1888.					
Dec. 31	316	Chas. M. Martin.....	Supplies.....	62 43	
31	317	Frank Smith.....	".....	19 20	
31	318	Peninsular Paper Co.....	".....	4 32	
31	319	Ypsilanti postoffice.....	Postage.....	10 00	
31	320	Ypsilanti Gas Co.....	Lights.....	45 40	
31	321	Thos. Charles.....	Museum.....	17 22	
31	322	Ward & Howell.....	".....	75 15	
31	323	C. Dorlinger & Son.....	".....	11 38	
31	324	H. T. Phillips & Co.....	".....	28 46	
31	325	Wm. Reid.....	Supplies.....	1 00	
31	326	M. S. Leach.....	Museum.....	9 00	
31	327	C. F. Enders.....	".....	88 00	
31	328	S. S. Babcock.....	Contingent.....	200 00	
31	329	J. M. B. Sill.....	".....	20 83	
31	330	J. Everett Smith.....	Fuel.....	100 00	
31	331	Smith & Osband.....	Printing.....	220 00	
31	332	S. S. Babcock.....	".....	34 10	
31	333	Detroit News Co.....	Supplies.....	2,797 07	
31	334	F. J. Schwankovsky.....	Piano.....	600 00	
1889.					\$23,410 26
Jan. 31	335	Henry A. Ward.....	Museum.....	\$47 05	
31	336	Western Union Telegraph Co.....	Contingent.....	6 72	
31	337	B. Westerman & Co.....	Apparatus.....	23 19	
31	338	Smith & Osband.....	Supplies.....	8 75	
31	339	Pay roll for January.....	Salaries.....	3,577 00	
31	340	W. A. Olmstead.....	Kindergarten supplies.....	98 34	
31	341	Whitall, Tatum & Co.....	Museum.....	9 31	
Feb. 25	342	Pay roll for February.....	Salaries.....	3,597 00	
Mar. 12	343	C. H. Decker.....	Apparatus.....	8 50	
25	344	Union School Furniture Co.....	Furniture.....	30 00	
25	345	M. S. Smith & Co.....	".....	34 00	
25	346	C. F. Enders.....	".....	10 00	
25	347	Frank A. Norton.....	Museum.....	7 50	
25	348	E. T. Curtis.....	Kindergarten supplies.....	12 98	
25	349	O. E. Thompson & Sons.....	Repairs.....	14 86	
25	350	Lansing Iron & Engine Works.....	".....	2 46	
25	351	Coe Bros.....	Supplies.....	18 20	
25	352	Samuel Hand.....	Repairs.....	8 50	
25	353	John Bibb.....	Extra labor.....	8 00	
25	354	The Peninsular Paper Co.....	Supplies.....	6 88	
25	355	Ypsilanti Gas Co.....	Lights.....	44 00	
30	356	March pay roll.....	Salaries.....	3,597 00	
30	357	John E. Mathews.....	Supplies.....	2 75	
30	358	J. M. B. Sill.....	Apparatus.....	1 00	
30	359	Walter Hewitt.....	Pianos and organs.....	8 00	
30	360	Eberbach & Sons.....	Apparatus.....	5 78	
30	361	".....	".....	6 30	
30	362	J. M. B. Sill.....	Museum.....	2 23	
30	363	".....	Supplies.....	6 15	
30	364	".....	Contingent.....	6 34	
30	365	Ypsilanti postoffice.....	Postage.....	5 00	
30	366	J. M. B. Sill.....	Freight and express.....	1 90	
30	367	".....	Extra labor.....	1 75	
30	368	Ypsilanti Gas Co.....	Lights.....	31 20	
30	369	Smith & Osband.....	Printing.....	7 39	
Mar. 30	370	A. W. Kenny.....	Repairs.....	8 45	
Apr. 30	371	Pay roll for April.....	Salaries.....	3,677 00	
May 1	372	E. K. Belford & Sons.....	Fuel.....	335 18	
1	373	D. Edwards.....	Repairs.....	11 35	
1	374	Calvert Lith. & Engraving Co.....	Diplomas.....	5 40	
1	375	Ypsilanti post office.....	Postage.....	20 00	
1	376	Peninsular Paper Co.....	Supplies.....	9 78	
1	377	Tel. & Telephone Const Co.....	Rent of telephone.....	12 00	
		Carried forward.....		\$33,787 36	

STATE BOARD OF EDUCATION.

EXHIBIT C.—CONTINUED.

Date.	No. of Voucher	Payee.	For What Object.	Amount.	
		Brought forward.....		\$28,787 36	
1889.					
May 1.....	378	Drury & Taylor.....	Supplies.....	1 27	
1.....	379	E. Samson.....	".....	8 36	
1.....	380	Mich. Bell Telephone Co.....	Use of state line.....	1 05	
1.....	381	Coe Bros.....	Printing.....	17 00	
1.....	382	The Detroit News Co.....	Supplies.....	195 70	
1.....	383	W. A. Olmstead.....	Furniture.....	16 00	
1.....	384	C. F. Enders.....	Kindergarten supplies.....	58 25	
1.....	385	James W. Queen & Co.....	Apparatus.....	42 40	
1.....	386	Educational Supply Co.	".....	46 71	
1.....	387	S. S. Babcock.....	Loan paid.....	143 72	
1.....	388	Ypsilanti Gas Co.....	Lights.....	53 80	
1.....	389	J. M. B. Sill.....	Freight and express.....	80	
1.....	390	Chicago Kindergarten Supply Co.....	Kindergarten supplies.....	20 28	
1.....	391	J. M. B. Sill.....	Supplies & extra labor.....	4 00	
1.....	392	".....	Chemicals.....	1 00	
1.....	393	O. R. Thompson.....	Fuel.....	150 39	
1.....	394	".....	Repairs.....	70 70	
1.....	395	Frances L. Stewart.....	Salary.....	15 00	
31.....	396	W. P. Bowen.....	".....	30 00	
31.....	397	C. D. McLouth.....	".....	120 00	
31.....	398	Amelia Hale.....	".....	30 00	
31.....	399	H. W. Miller.....	".....	160 00	
31.....	400	May pay roll.....	".....	3,782 00	
June 28.....	401	June pay roll.....	".....	3,782 00	
28.....	402	S. S. Babcock.....	Contingent.....	200 00	
28.....	403	J. M. B. Sill.....	Repairs.....	170 53	
28.....	404	Calvert Lith. & Eng. Co.....	Diplomas.....	90 75	
28.....	405	Wm. H. Brooks.....	Engrossing diplomas.....	25 00	
28.....	406	Smith & Osband.....	Printing.....	328 55	
28.....	407	J. M. B. Sill.....	Repairs.....	12 55	
28.....	408	Smith & Osband.....	Supplies.....	8 00	
28.....	409	Ypsilanti Gas Co.....	Lights.....	25 80	
28.....	410	J. M. B. Sill.....	Freight and express.....	75	
28.....	411	Henry T. Coe.....	Printing.....	28 50	
28.....	412	Frank Smith.....	Supplies.....	34 31	
28.....	413	C. King & Son.....	".....	1 30	
28.....	414	The Richmond & Backus Co.....	".....	6 50	
28.....	415	Normal News.....	Contingent.....	10 00	
28.....	416	Frank Potter.....	Pianos and organs.....	15 00	
28.....	417	Normal News.....	Printing & advertising.....	25 00	
28.....	418	Ypsilanti postoffice.....	Postage.....	22 25	
28.....	419	C. King & Son.....	Repairs.....	57 50	
28.....	420	George Van Grierson.....	Supplies.....	6 00	
28.....	421	Peninsular Paper Co.....	".....	14 16	
28.....	422	Albert A. Stanley.....	Contingent.....	10 00	
1888.					\$48,630 54
Sept. 29.....		Transferred to library fund.....		\$500 00	
1889.					
June 29.....		" " ".....		1,500 00	2,000 00
Total credits to current expense for fiscal year.....					\$50,630 54

EXHIBIT C.—CONTINUED.

II.—Building and Special Purposes.

Date.	No. of Voucher	Payee.	Amount.	
1.—Building Additions.				
1888.				
July 7	78	D. Edwards	\$52 00	
Aug. 1	80	Hess & Roseman	150 00	
11	81	D. Edwards	52 00	
23	83	Dean Bros.	5,500 00	
24	85	J. L. Harlow	315 00	
24	86	Edwin T. Rorison	2 00	
31	89	D. Edwards	54 00	
Sept. 4	90	Dean Bros.	1,200 00	
5	91	"	3,000 00	
19	98	Brand & McCollough	665 78	
20	99	A. H. Pierson	7 00	
20	100	George Bartlett	12 25	
20	101	John Bibb	14 88	
20	102	Michael O'Brien	14 25	
20	103	Arthur Jones	87 50	
20	104	Hess & Roseman	175 00	
Oct. 20	105	George Seney	24 40	
1	109	J. L. Harlow	10 09	
1	110	U. Armstrong & Son	400 82	
13	112	D. Edwards	54 00	
13	118	O. E. Thompson	5 59	
13	114	Drury & Taylor	13 87	
13	115	Arthur Jones	9 00	
19	119	Dean Bros.	859 75	
Nov. 1	128	Globe Furniture Co.	280 60	
30	130	James Coquillard	22 85	
30	131	A. W. Kenny	12 78	
30	139	Smith & Osband	150 00	
Dec. 14	148	Fulmore & Scoville	110 47	
14	146	H. W. Worden	96 80	
31	153	S. W. Pearson & Co.	10 08	
31	158	J. M. B. Sill	48 48	
31	141	Thomas L. McKeen	127 50	
31	165	McElcherson & McAndrews	24 00	
31	166	Lornback & Habler	10 00	
31	167	C. F. Enders	13 00	
		Total credits, building additions	\$13,482 97	
31		Transferred to seating and furnishing fund	21 02	
		Balance on hand	2 14	\$13,506 13
2.—Heating Apparatus.				
July 12	79	Detroit Metal & Heating Works	\$1,000 00	
Aug. 16	82	Nutt & Clark	25 00	
Sept. 5	92	Detroit Metal & Heating Works	300 00	
26	107	"	510 00	
12	116	Peter Dresser	9 68	
Oct. 19	120	James W. Partlan	272 89	
Nov. 1	125	MacDonald Bros. & Co.	95 09	
30	122	Ypsilanti Gas Co.	42 79	
30	123	"	65 15	
30	125	Adelphic Society	25 00	
30	126	Olympic "	25 00	
30	127	Athenaeum "	25 00	
30	128	Crescent "	25 00	
Dec. 14	145	W. G. Martin	11 75	
31	149	Ypsilanti Gas Co.	18 66	
31	155	W. G. Martin	45 50	
31	156	J. W. Partlan	27 17	
		Carried forward	\$2,521 60	

STATE BOARD OF EDUCATION.

EXHIBIT C.—CONTINUED.

Date.	No. of Voucher	Payee.	Amount.	
		Brought forward.....	\$3,531 60	
1888.				
Dec. 31.....	157	Ypeilanti Mashine Works.....	29 26	
31.....	161	A. Harvey & Sons.....	91 11	
31.....	162	Ypeilanti Gas Co.....	72 50	
		Total for heating apparatus.....	\$2,714 47	
		Transferred to seating and furnishing.....	310 45	\$3,025 00
		3.—Seating and Furnishing.		
Aug. 24.....	87	U. Armstrong & Son.....	\$650 00	
31.....	88	Dudley & Fowle.....	279 00	
Sept. 12.....	93	U. Armstrong & Son.....	200 00	
19.....	95	MacDonald Bros. & Co.....	536 00	
20.....	96½	The Globe Furniture Co.....	1,008 75	
20.....	96	C. F. Enders.....	168 75	
20.....	106	C. D. Stuart.....	118 10	
Oct. 18.....	111	James Metcalf.....	71 17	
18.....	117	The Globe Furniture Co.....	471 10	
18.....	118	C. F. Enders.....	42 80	
19.....	121	Zabriskie & Bennett.....	6 80	
24.....	122	Dudley & Fowle.....	53 00	
24.....	123	James Metcalf.....	135 00	
Nov. 30.....	134	The Globe Furniture Co.....	177 60	
Dec. 14.....	140	Charles A. Strallinger.....	26 40	
14.....	142	C. F. Enders.....	21 00	
14.....	147	J. M. B. Sill.....	6 75	
31.....	148	F. K. Baxford & Sons.....	299 63	
31.....	154	C. F. Enders.....	100 00	
31.....	159	Thos. Charles.....	6 52	
31.....	160	MacDonald Bros. & Co.....	73 10	4,506 47
		4.—Library.		
Aug. 22.....	84	Houghton, Mifflin & Co.....	\$6 50	
Sept. 12.....	94	The Microscope Publishing Co.....	75	
20.....	97	Cassius M. Upton.....	43 00	
29.....	108	John L. Atwater.....	6 00	
Oct. 25.....	124	John MacFarlane.....	167 58	
Nov. 12.....	127	Publishers' Weekly.....	7 00	
12.....	128	N. D. C. Hodges, publisher.....	3 50	
19.....	129	John MacFarlane.....	299 54	
Dec. 14.....	144	John MacFarlane.....	104 17	
31.....	150	D. Appleton & Co.....	12 00	
31.....	151	John MacFarlane.....	291 52	
31.....	163	".....	71 80	
31.....	164	".....	304 50	
1889.				
May 13.....	168	Houghton, Mifflin & Co.....	6 50	
June 18.....	169	C. H. Pursell.....	5 00	
28.....	170	John L. Atwater.....	6 00	
28.....	171	J. M. B. Sill.....	6 00	
		Total credits to library.....	\$1,346 36	
		Balance to new account.....	1,476 89	2,823 25
		Total credits (B. and Spl. P.) including bal. and trans.....		\$23,890 85
		Deduct transfers.....		2,331 47
		Total less transfers (building and special purposes).....		\$21,559 38
		Current expense.....	\$50,630 54	
		Building and special purposes.....	21,529 38	
		Total credits for all purposes.....	\$72 159 92	

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EXHIBIT D.

S. S. BABCOCK, TREASURER, CR.

FOR FISCAL YEAR ENDING JUNE 30, 1890.

I.—Current Expense.

Date.	No. of Voucher	Payee.	For What Object.	Amount.
1889				
July 1		By balance overdrawn at end of year.		\$1,500 56
Aug. 1	423	Pay roll for July.	Salaries.	265 00
1	454	F. P. Bogardus, agent.	Insurance.	186 00
1	425	Julia E. Sherman, agent.	"	180 00
1	426	P. W. Carpenter & Son, agent.	"	126 00
1	427	Frank Joalyn, agent.	"	126 00
1	428	D. B. Green, agent.	"	186 00
1	429	C. F. Taylor, agent.	"	36 00
1	430	Ypsilanti Gas Co.	Lights.	24 60
1	431	Walter Hewitt.	Piano and Organ.	10 00
1	432	Ypsilanti postoffice.	Postage.	25 00
1	438	W. M. Sweet.	Diplomas.	4 25
1	484	Ypsilanti Ladies' Library Associ'n.	Contingent.	200 00
1	435	Quirk & King.	Repairs.	10 20
1	436	H. B. Pattengill, pub.	Advertising.	25 00
1	437	J. M. B. Sill.	Repairs.	58 85
1	438	Smith & Osband.	Printing.	12 00
1	439	Clayton, Lambert & Co.	Apparatus.	3 25
1	440	T. C. Grawn.	Board of visitors.	27 20
1	440½	Library Bureau.	Supplies.	21 00
1	441	The Richmond & Backus Co.	"	5 00
15	442	Ostler Printing Co.	"	115 00
31	443	Charles M. Martin.	"	41 64
31	444	Mich. Bell Telephone Co.	Use of line.	1 35
31	445	Tel. & Telephone Construction Co.	Rent of phone.	12 00
31	446	James Coquillard.	Repairs.	11 50
31	447	John Bibb.	Extra labor.	8 00
31	448	John E. Matthews.	Supplies.	2 75
31	449	F. K. Rexford & Sons.	Fuel.	2,480 65
31	450	"	Supplies.	24 75
31	451	Moore & Stewart.	"	2 95
31	452	F. P. Bogardus, agent.	Insurance.	108 00
31	453	O. Hannecke.	Apparatus.	85 85
31	454	Peninsular Paper Co.	Supplies.	8 00
31	455	Globe Furniture Co.	Furniture.	98 40
31	456	M. A. Fairbank.	Board of visitors.	9 85
31	457	Pay roll for August.	Salaries.	265 00
Sept. 30	458	The Detroit News Co.	Supplies.	390 70
30	459	Pay roll for September.	Salaries.	3,882 00
30	460	C. F. Enders.	Furniture.	91 67
30	461	James Nall & Co.	Supplies.	64 13
30	462	The Detroit News Co.	"	85 02
30	463	E. A. Strong.	Repairs.	96 97
30	464	O. E. Thompson & Sons.	"	268 00
30	465	F. H. Barnum.	Museum.	2 50
30	466	Howling & Shafer.	Apparatus.	1 20
30	467	Smith & Osband.	Printing.	20 05
30	468	J. E. Beaset.	Extra labor.	2 50
30	469	Ypsilanti postoffice.	Postage.	15 25
30	470	Ypsilanti Paper Box Co.	Museum.	1 85
30	471	James Hobeon.	"	75 75
30	472	O. E. Thompson & Sons.	Repairs.	18 43
Oct. 5	473	J. M. B. Sill.	Contingent.	8 78
			Extra labor.	6 50
			Museum.	1 50
			Repairs.	1 05
		Carried Forward.		\$11,248 45

STATE BOARD OF EDUCATION.

EXHIBIT D.—Continued.

Date.	No. of Voucher	Payee.	For What Object.	Amount.
1889		Brought Forward.....		\$11,348 45
Oct. 5	474	By J. M. B. Sill	Freight and Express	6 85
5	475	J. L. Harlow	Repairs	4 50
5	476	James M. Southwick	Museum	22 86
5	477	Geo. H. Barton	"	27 68
5	478	C. F. Enders	Apparatus	25 00
5	479	Theodore Nelson	Board of visitors	12 50
5	480	W. A. Olmstead	Kindergarten supplies	17 60
5	481	Whital, Tatum & Co.	Apparatus	22 87
5	482	Bausch & Lomb Optical Co.	"	6 68
17	483	L. J. McSweeney	Contingent	1 50
22	484	Tribune Printing Co.	"	18 00
31	485	Lillian Crawford	Salaries	10 00
31	486	W. P. Bowen	"	10 00
31	487	Pay roll for October	"	3,852 00
Nov. 7	488	The Detroit News Co.	Supplies	92 14
9	489	A. S. Barnes & Co.	Training school sup'li's	20 00
30	490	Pay roll for November	Salaries	3,852 00
Dec. 3	491	Frank Smith	Repairs	20 15
3	492	Ypsilanti postoffice	Supplies	22 00
			Postage	8 00
3	493	Ypsilanti Gas Co.	Lights	28 80
3	494	"	"	34 00
3	495	Peninsular Paper Co.	Supplies	6 80
3	496	Moore & Stewart	"	8 53
8	497	Tel. & Telephone Construction Co.	Rent of phone	12 00
8	498	Mich. Bell Telephone Co.	Use of line	75
3	499	E. Damon	Repairs	7 18
3	500	O. E. Thompson & Sons	"	10 79
2	501	A. W. Kinney	"	46 36
3	502	Frank Smith	Training school sup'li's	26 70
3	503	Robbins & Edwards	Repairs	23 87
3	504	F. K. Rexford & Sons	Furniture	33 63
8	505	C. D. Stuart	"	11 00
3	506	Bausch & Lomb Optical Co.	Apparatus	8 81
3	507	A. E. Foote	"	7 30
3	508	Henry T. Coe	Printing	14 60
3	509	Peninsular Paper Co.	Training school sup'li's	14 98
3	510	Cadillac News and Express	"	22 50
8	511	Lucy A. Osband	Museum	2 72
8	512	James M. Southwick	"	15 27
3	513	R. N. Reynolds, M. D.	Apparatus	6 40
3	514	Chas. M. Norton	Repairs	5 87
3	515	D. Appleton & Co.	Training school sup'li's	18 50
3	516	Ypsilanti Machine Works	Repairs	83 17
3	517	MacDonald Bros. & Co.	Furniture	77 75
3	518	J. M. B. Sill	Extra labor	40 90
8	519	Chicago Kindergarten Supply Co.	Kindergarten supplies	43 45
8	520	W. A. Olmstead	Training school sup'li's	11 40
8	521	MacDonald Bros. & Co.	Repairs	4 00
3	522	J. M. B. Sill	Freight and express	7 55
3	523	J. M. B. Sill	Contingent	6 30
3	524	B. Westerman & Co.	Apparatus	21 53
8	525	The Richmond & Backus Co.	Supplies	3 60
3	526	Henry T. Coe	Repairs	43 35
3	527	Eberbach & Son	Museum	8 65
13	528	Farrand & Williams	Supplies	10 68
31	529	Pay roll for December	Salaries	3,852 00
31	530	Detroit Dry Dock Co.	Contingent	32 50
31	531	H. D. Edwards & Co.	"	2 54
31	532	W. J. Button, agent	Supplies	112 50
		Carried Forward.....		\$34,135 97

FIFTH BIENNIAL REPORT.

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EXHIBIT D.—CONTINUED.

Date.	No. of Voucher	Payee.	For What Object.	Amount.
		Brought forward.....		\$24,135 97
1889				
Dec. 31.....	533	By Ypsilanti Gas Co.....	Lights.....	\$42 00
31.....	534	.....	.....	44 00
31.....	535	Frank Smith.....	Supplies.....	4 98
31.....	536	E. Sampson.....	.....	7 90
31.....	537	Mich. Bell Telephone Co.....	Use of line.....	1 25
31.....	538	Tel. & Telephone Const. Co.....	Rent of telephone.....	12 00
31.....	539	S. S. Babcock.....	Contingent.....	200 00
31.....	540	Ypsilanti Gas Co.....	Repairs.....	57 64
31.....	541	" ".....	.....	5 25
31.....	542	" ".....	.....	9 07
31.....	543	C. D. Stuart.....	Furniture.....	114 75
31.....	544	F. K. Bexford & Sons.....	.....	98 03
31.....	545	C. F. Enders.....	Training school supplies.....	50 00
31.....	546	C. N. Ellis.....	Repairs.....	3 54
31.....	547	W. W. Worden.....	.....	44 19
31.....	548	" ".....	.....	23 80
31.....	549	Hall & Norton.....	.....	20 92
31.....	550	Chas. N. Norton.....	.....	21 49
31.....	551	E. P. Rorison.....	.....	25 00
31.....	552	Ypsilanti Gas Co.....	.....	18 69
31.....	553	McCullough Bros.....	.....	12 97
31.....	554	John Bibb.....	Extra labor.....	8 00
31.....	555	C. F. Enders.....	Furniture.....	172 85
31.....	556	E. M. Comstock & Co.....	Museum.....	4 75
31.....	557	H. Fairchild & Co.....	.....	2 75
31.....	558	Lucy A. Osband.....	.....	75
31.....	559	Bausch & Lomb Optical Co.....	.....	67 50
31.....	560	C. F. Enders.....	.....	6 00
31.....	561	" ".....	.....	122 25
31.....	562	" ".....	.....	69 75
31.....	563	C. D. McLouth.....	.....	8 00
31.....	564	Eberbach & Son.....	.....	5 90
31.....	565	Harding & Shafer.....	.....	9 48
31.....	566	Ward's Nat. Science Establishm't.....	.....	452 05
31.....	567	Harding & Shafer.....	.....	1 77
31.....	568	D. C. Worcester.....	.....	31 40
31.....	569	August Moeller.....	Pianos and organs.....	20 00
31.....	570	Eberbach & Son.....	Museum.....	1 23
31.....	571	" ".....	Apparatus.....	6 00
31.....	572	" ".....	.....	13 18
31.....	573	" ".....	.....	52 81
31.....	574	" ".....	.....	10 24
31.....	575	" ".....	.....	21 68
31.....	576	" ".....	.....	18 77
31.....	577	Frank Potter.....	Pianos and organs.....	12 77
31.....	578	Herman J. Jaeger.....	.....	17 50
31.....	579	E. B. Ritchie & Sons.....	Apparatus.....	22 58
31.....	580	Smith & Osband.....	.....	56 15
31.....	581	" ".....	Museum.....	8 50
31.....	582	Union School Furniture Co.....	Printing.....	3 75
31.....	583	J. M. B. Sill.....	Furniture.....	108 00
31.....	584	" ".....	Repairs.....	58 90
31.....	585	" ".....	.....	4 41
31.....	586	" ".....	Contingent.....	13 30
31.....	587	Frank Smith.....	Freight and express.....	10 35
31.....	588	James W. Queen & Co.....	Training school supplies.....	3 50
31.....	589	" ".....	Apparatus.....	38 25
31.....	590	Homer Briggs.....	.....	52 07
31.....	591	Henry F. Coe.....	Freight and express.....	41 61
31.....	592	" ".....	Repairs.....	5 60
		Carried forward.....		\$26,517 89

STATE BOARD OF EDUCATION.

EXHIBIT D.—CONTINUED.

Date.	No. of Voucher	Payee.	For What Object.	Amount.
		Brought forward.....		\$26,517 89
1890.				
Jan. 31.....	590	By L. J. McSweeney.....	Contingent.....	5 00
31.....	591	Detroit Block Works.....	".....	1 50
31.....	592	Pay roll for January.....	Salaries.....	2,832 00
31.....	593	H. H. Tamner.....	Museum.....	27 70
31.....	594	W. H. Judd.....	Contingent.....	7 95
31.....	595	O. E. Thompson & Sons.....	".....	2 25
31.....	596	Folmore & Scoville.....	Repairs.....	1 89
31.....	597	Robbins & Edwards.....	Contingent.....	2 80
31.....	598	Peninsular Paper Co.....	Supplies.....	11 84
31.....	599	E. P. Horison.....	Contingent.....	7 00
31.....	600	".....	Repairs.....	4 40
31.....	601	John E. Matthews.....	Supplies.....	2 75
31.....	602	Homer Briggs.....	Contingent.....	16 20
31.....	603	Ypsilanti postoffice.....	Postage.....	19 00
31.....	604	Henry T. Coe.....	Printing.....	5 00
31.....	605	J. M. B. Sill.....	{ Contingent.....	1 15
31.....	606	J. H. Emerton.....	{ Freight and express.....	4 80
31.....	607	J. M. B. Sill.....	Apparatus.....	21 50
Feb. 6.....	608	The Richmond & Backus Co.....	Contingent.....	1 00
			Supplies.....	4 75
14.....	609	Normal News.....	Advertising.....	25 00
18.....	609½	The Detroit News Co.....	Supplies.....	27 00
28.....	610	Pay roll for February.....	Salaries.....	3,922 00
Mar. 31.....	611	Smith & Osband.....	Printing.....	24 50
31.....	612	Ward & Howell.....	Museum.....	26 75
31.....	613	C. D. McLouth.....	".....	6 60
31.....	614	J. M. B. Sill.....	Extra labor.....	3 50
31.....	615	".....	Freight and express.....	2 05
31.....	616	A. H. Andrews & Co.....	Furniture.....	15 75
31.....	617	Chicago Kindergarten Supply Co.....	Kindergarten supplies.....	18 06
31.....	618	O. E. Thompson & Sons.....	Contingent.....	3 40
31.....	619	J. S. Lang.....	Repairs.....	21 43
31.....	620	Ypsilanti Gas Co.....	Lights.....	44 40
31.....	621	".....	".....	37 00
31.....	622	Peninsular Paper Co.....	Training sch'l supplies.....	7 28
31.....	623	".....	Supplies.....	6 40
31.....	624	E. P. Horison.....	Repairs.....	24 90
31.....	625	W. C. Stevens.....	".....	1 10
31.....	626	Frank Smith.....	Contingent.....	20 00
31.....	627	The Richmond & Backus Co.....	Supplies.....	23 75
31.....	628	Julia A. King.....	".....	5 25
31.....	629	Pay roll for March.....	Salaries.....	3,922 00
April 21.....	630	MacDonald Bros. & Co.....	Furniture.....	23 00
30.....	631	Ypsilanti post office.....	Postage.....	15 00
30.....	632	Charles C. Gerry.....	Supplies.....	9 50
30.....	633	Peninsular Paper Co.....	".....	11 28
30.....	634	J. M. B. Sill.....	".....	3 40
30.....	635	".....	Contingent.....	4 75
30.....	636	Frances L. Stewart.....	".....	2 30
30.....	637	J. M. B. Sill.....	Extra labor.....	3 50
30.....	638	Bansch & Lomb Optical Co.....	Apparatus.....	5 40
30.....	639	E. P. Horison.....	Repairs.....	60 60
30.....	640	S. J. Remington.....	".....	7 75
30.....	641	C. D. Stuart.....	Furniture.....	4 95
30.....	642	Chicago Kindergarten Supply Co.....	Kindergarten supplies.....	39 25
30.....	643	O. E. Thompson & Sons.....	Fuel.....	234 30
30.....	644	The Richmond & Backus Co.....	Supplies.....	2 80
30.....	645	L. Beckman.....	Apparatus.....	6 00
May 1.....	646	Pay roll for April.....	Salaries.....	3,922 00
2.....	647	The Richmond & Backus Co.....	Supplies.....	3 40
31.....	648	The city of Ypsilanti.....	Water.....	175 00
		Carried forward.....		\$42,275 12

FIFTH BIENNIAL REPORT.

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EXHIBIT D.—CONTINUED.

Date.	No. of Voucher	Payee.	For What Object.	Amount.	
1890.		Brought forward.....		\$48,275 12	
May 31.....	649	Frances L. Stewart, clerk.....	Admission fees return'd.....	270 00	
31.....	650	Tel. & Telephone Const. Co.....	Rent of telephone.....	12 00	
31.....	651	Robbins & Edwards.....	Repairs.....	6 54	
31.....	653	C. C. Vroman.....	Contingent.....	20 00	
31.....	653	C. W. Rogers.....	Furniture.....	4 65	
31.....	654	J. M. B. Sill.....	Repairs.....	21	
31.....	655	John Bibb.....	Museum.....	98	
31.....	656	E. P. Rorison.....	Apparatus.....	3 34	
31.....	657	Ypsilanti Gas Co.....	Supplies.....	53	
31.....	658	Moore & Stewart.....	Repairs.....	12 20	
31.....	659	J. M. B. Sill.....	".....	55 50	
31.....	660	J. M. B. Sill.....	Lights.....	22 40	
31.....	661	Pay roll for May.....	Supplies.....	36 40	
June 30.....	662	Pay roll for June.....	Supplies.....	11 05	
30.....	663	S. L. Shaw.....	Contingent.....	1 65	
30.....	664	J. M. B. Sill.....	Express.....	25	
30.....	665	".....	Supplies.....	35	
30.....	666	F. K. Bexford & Sons.....	Salaries.....	3,922 00	
30.....	667	Ladies' Library Association.....	".....	3,922 00	
30.....	668	Hilda Lodeman.....	Repairs.....	8 67	
30.....	669	Ypsilanti postoffice.....	Contingent.....	24 80	
30.....	670	Calvert Lith. & Engraving Co.....	Freight and express.....	1 25	
30.....	671	S. S. Babcock.....	Furniture.....	177 75	
30.....	672	Detroit News Co.....	Contingent.....	200 00	
30.....	673	Clark Cornwall.....	Supplies.....	18 88	
30.....	674	C. M. Norton.....	Diplomas.....	30 50	
30.....	675	Smith & Osband.....	Postage.....	51 95	
30.....	676	E. P. Rorison.....	Diplomas.....	230 50	
30.....	677	Frank Smith.....	Contingent.....	200 00	
30.....	678	".....	Supplies.....	18 88	
30.....	679	".....	Laboratory.....	50	
30.....	680	Peninsular Paper Co.....	Museum.....	3 58	
30.....	681	Smith & Osband.....	Supplies.....	1 44	
30.....	682	Ypsilanti Gas Co.....	Repairs.....	30 21	
30.....	683	Henry B. Clark.....	Supplies.....	25 82	
30.....	684	Henry T. Coe.....	Training sch'l supplies.....	16 85	
30.....	685	Peninsular Paper Co.....	Supplies.....	6 00	
30.....	686	".....	Printing & advertising.....	20 00	
30.....	687	".....	Museum.....	2 50	
30.....	688	".....	Supplies.....	9 75	
30.....	689	".....	Lights.....	27 20	
30.....	690	".....	Repairs.....	1 00	
30.....	691	".....	".....	15 75	
30.....	692	".....	Training sch'l supplies.....	8 00	
30.....	693	".....	Supplies.....	7 20	
Mar. 29.....		Transferred to library.....			\$53,138 40
					1,500 00
Total credits to current expense for fiscal year.....					\$54,638 40
Balance on hand to new account.....					9,998 00
Deduct transfers.....					\$64,636 40
Total less transfers.....					1,500 00
					\$63,136 40

STATE BOARD OF EDUCATION.

EXHIBIT D.—CONTINUED.

II.—On Account of Building and Special Purposes.

Date.	No. of Voucher	Payee.	Amount.	
<i>1.—Building Additions.</i>				
1889. Sept. 30	173	John M. B. Sill		\$2 14
<i>2.—Library.</i>				
Aug. 1	172	John MacFarlane	\$25 34	
Nov. 16	174	" "	219 83	
Dec. 13	175	New England Publishing Company	5 00	
13	176	John MacFarlane	216 48	
31	177	" "	237 33	
31	178	" "	71 05	
31	179	" "	264 18	
31	180	The Normal Lyceum	75 00	
1890.				
Feb. 6	181	John MacFarlane	12 00	
14	182	E. H. Strong	7 50	
14	183	Houghton, Mifflin & Co.	6 50	
Mar. 15	184	John MacFarlane	142 85	
17	185	Bacon Bros. Publishing Co.	24 00	
31	186	J. S. Bethel, agent	6 50	
April 9	187	John MacFarlane	87 07	
28	188	" "	185 61	
May 2	189	" "	82 90	
2	190	" "	52 90	
31	191	" "	188 14	
June 30	192	" "	18 35	
30		Balance on hand	1,048 34	
Total building and special purposes				2,976 89
				2,979 08
Current expense			\$68,136 40	
Building and special purposes			2,979 08	
Total for all purposes			\$66,115 48	

RECAPITULATION.—CR.

Current expense 1888-1889	\$50,630 54	
" " 1889-1890	68,136 40	
		\$118,766 94
Building additions, etc., 1888-1889	\$21,529 83	
" " 1889-1890	2,979 03	
		24,508 41
Total for all purpose for two years		\$138,275 35

EXHIBIT E.

SALARY ACCOUNT—DR.

FOR FISCAL YEAR ENDING JUNE 30, 1889.

Date.	Payee.	Amount.	
1888.			
June 30	To J. M. B. Sill, services for year	\$3,500 00	
30	Daniel Putnam, " "	2,500 00	
30	F. H. Pease, " "	2,000 00	
30	C. F. E. Bellows, " "	2,000 00	
30	A. Lodeman, " "	2,000 00	
30	Austin George, " "	2,000 00	
30	E. A. Strong, " "	2,000 00	
30	F. A. Barbour, " "	2,000 00	
30	John Goodison, " "	2,000 00	
30	E. L. D'Ooge, " "	2,000 00	
30	Julia A. King, " "	1,500 00	
30	Lacy A. Osband, " "	1,000 00	
30	Charles E. St. John, " "	1,000 00	
30	W. A. Weeks, " "	800 00	
30	Abbie Pearce, " "	800 00	
30	Lois McMahon, " "	800 00	
30	Annie A. Paton, " "	800 00	
30	William H. Brooks, " "	800 00	
30	Nina C. Vandewalker, " "	800 00	
30	Geo. F. Key, " "	800 00	
30	C. C. Vroman, " "	720 00	
30	Florence Goodison, " "	580 00	
30	Frances L. Stewart, 10½ months' services	488 50	
30	Amelia Hale, services for year	450 00	
30	W. P. Bowen, " "	450 00	
30	H. W. Miller, " "	640 00	
30	Ella M. Hayes, " "	400 00	
30	James A. Baily, " "	420 00	
30	C. D. McLouth, " "	600 00	
30	John White, " "	355 00	
30	P. E. Cleary, " "	250 00	
30	Mary L. Lockwood, services for 3 months	240 00	
30	J. B. Arms, services for 5¼ months	220 00	
30	Ernest Goodrich, services for 5 months	10 00	
Jan. 31	Volmore L. Stewart, services for 4 months	8 00	
1888.			
Aug. 31	W. H. Smith, services for 1¼ months	102 00	
Sept. 30	Fred Pease, services for 1 month	2 00	
			\$37,035 50
	CR.		
Aug. 1	By pay roll for July, voucher 264	\$220 00	
31	" " August, voucher 271	220 50	
Sept. 29	" " September, voucher 280	3,557 00	
Oct. 30	" " October, " 284	3,557 00	
Nov. 30	" " November, " 288	3,557 00	
Dec. 31	" " December, " 308	3,557 00	
1889.			
Jan. 31	" " January, " 339	3,577 00	
Feb. 28	" " February, " 342	3,597 00	
Mar. 30	" " March, " 358	3,597 00	
April 30	" " April, " 371	3,877 00	
May 31	" " May, " 400	3,782 00	
31	arrears of salary vouchers Nos. 395, 396, 397, 398 and 399	355 00	
June 28	pay roll for June, voucher No. 401	3,782 00	
			\$7,035 50

STATE BOARD OF EDUCATION.

EXHIBIT F.

SALARY ACCOUNT.—DR.

FOR FISCAL YEAR ENDING JUNE 30, 1890.

Date.	Payee.	Amount.	
1890.			
June 30	To J. M. B. Sill, services for year	\$3,500 00	
30	Daniel Putnam, " "	2,500 00	
30	F. H. Pease, " "	2,000 00	
30	C. F. B. Bellows, " "	2,000 00	
30	A. Lodeman, " "	2,000 00	
30	Austin George, " "	2,000 00	
30	E. A. Strong, " "	2,000 00	
30	F. A. Barbour, " "	2,000 00	
30	John Goodison, " "	2,000 00	
30	B. L. D'Ooge, " "	2,000 00	
30	Julia A. King, " "	1,500 00	
30	Luey A. Osband, " "	1,000 00	
30	Charles E. St. John, " "	1,000 00	
30	Abbie Pearce, " "	800 00	
30	Lois A. McMahon, " "	800 00	
30	Annie A. Paton, " "	800 00	
30	William H. Brooks, " "	800 00	
30	Nina C. Vandewalker, " "	800 00	
30	George F. Key, " "	800 00	
30	H. W. Miller, " "	800 00	
30	C. D. McLouth, " "	800 00	
30	Mary F. Lockwood, " "	800 00	
30	Anna M. Soule, " "	800 00	
30	Helen B. Muir, " "	800 00	
30	W. P. Bowen, " "	800 00	
30	C. C. Vroman, " "	720 00	
30	Ella M. Hayes, " "	500 00	
30	Florence Goodison, " "	600 00	
30	Frances L. Stewart, " "	800 00	
30	Lillian Crawford, " "	500 00	
30	James A. Baily, " "	420 00	
30	John White, " "	360 00	
30	Nellie M. Sterling, services for 5 months	200 00	
30	P. B. Cleary, " "	250 00	
30	J. B. Arms, " "	480 00	
30	Ernest Goodrich, " "	20 00	
	CR.		\$30,550 00
1889.			
Aug. 1	July pay roll, voucher 423	\$265 00	
31	August pay roll, voucher 457	265 00	
Sept. 30	September pay roll, voucher 459	3,882 00	
Oct. 31	Lillian Crawford, " 485	10 00	
31	W. P. Bowen, " 486	10 00	
31	October pay roll, " 487	3,882 00	
Dec. 2	November pay roll, " 490	3,882 00	
31	December " 529	3,882 00	
1890.			
Jan. 31	January " " 592	3,882 00	
Feb. 28	February " " 610	3,922 00	
Mar. 31	March " " 629	3,922 00	
May 1	April " " 646	3,922 00	
31	May " " 661	3,922 00	
June 30	June " " 662	3,922 00	
			\$20,550 00

EXHIBIT G.—STATE OF MICHIGAN in account with S. S. Babcock, Treasurer of the State Board of Education, for the fiscal year ending June 30, 1889.

Credits.	Building Additions.	Heating Apparatus.	Seating and Furnishing.	Library.	Total of Building, Special, Etc.	Current Expenses.	Aggregate.	Aggregate exclusive of Balances and Transfers.
By Balance (on hand) July 1, 1888.....	\$7,681 13	\$3,025 00	—	\$823 25	\$11,529 38	\$255 08	\$11,784 46	—
Cash from State Treasury.....	5,825 00	—	\$4,175 00	—	10,000 00	49,408 00	53,408 00	\$33,408 00
Loan from.....	—	—	—	—	—	143 72	143 72	143 72
Cash from Earnings of Institution.....	—	—	—	—	—	5,101 50	5,101 50	5,101 50
Cash from other sources.....	—	—	—	—	—	221 68	221 68	221 68
Transfer (between funds) to.....	—	—	831 47	2,000 00	2,831 47	—	2,831 47	—
Total available during year.....	\$13,506 13	\$3,025 00	\$4,506 47	\$2,823 25	\$23,860 85	\$49,129 88	\$72,990 83	\$38,874 90
By Balance (overdrawn) to new account June 30, 1889.....	—	—	—	—	—	1,500 56	21 53	—
Footings.....	\$13,506 13	\$3,025 00	\$4,506 47	\$2,823 25	\$23,860 85	\$50,630 54	\$73,012 36	\$38,874 90
Debits.								
To Disbursements (exclusive of Loans paid).....	\$13,483 97	\$2,714 55	\$4,506 47	\$1,316 36	\$22,020 35	\$48,498 52	\$70,537 17	\$70,537 17
Loans paid.....	—	—	—	—	—	143 72	143 72	143 72
Transfer (between funds) from.....	21 02	310 45	—	—	331 47	2,000 00	2,831 47	—
Total Debits during year.....	\$13,503 99	\$3,025 00	\$4,506 47	\$1,316 36	\$22,361 82	\$50,630 54	\$73,012 36	\$70,680 89
To balance (on hand) to new account June 30, 1889.....	2 14	—	—	1,476 89	1,479 03	—	—	—
Footings.....	\$13,506 13	\$3,025 00	\$4,506 47	\$2,823 25	\$23,860 85	\$50,630 54	\$73,012 36	\$70,680 89

EXHIBIT H.—STATE OF MICHIGAN in account with S. S. Babcock, Treasurer of State Board of Education, for the fiscal year ending June 30, 1890.

(Credits.	Building Additions.	Library.	Total of Building, Special, etc.	Current Expenses.	Aggregate.	Aggregate exclusive of Balances and Transfers.
By Balance on hand July 1, 1889.....					\$1,479 08	
Cash from State Treasury.....	\$2 14	\$1,476 89	\$1,479 03	\$59,178 19	59,178 19	\$59,178 19
Cash from Earnings of Institution.....				5,274 40	5,274 40	5,274 40
Cash from other sources.....				183 81	183 81	183 81
Transfer (between funds)—to.....		1,500 00				
Total available during year ending June 30, 1890.....	\$2 14	\$2,976 89	\$2,979 03	\$64,636 40	\$66,115 43	\$64,636 40
Footings.....	\$2 14	\$2,976 89	\$2,979 03	\$64,636 40	\$66,115 43	\$64,636 40
Debits.						
To Balance (overdrawn) July 1, 1889.....						
Disbursements (exclusive of loans paid).....	\$2 14	\$1,928 55	\$1,930 69	\$1,500 56	\$1,500 56	
Transfer (between funds)—from.....				51,637 84	53,568 53	\$53,568 53
Total debits during year.....	\$2 14	\$1,928 55	\$1,930 69	\$54,638 40	\$55,069 09	\$53,568 53
To Balance (on hand) to new account June 30, 1890.....		1,048 34	1,048 34	9,986 00	11,046 34	
Footings.....	\$2 14	\$2,976 89	\$2,979 03	\$64,636 40	\$66,115 43	

FIFTH BIENNIAL REPORT.

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Estimates of money needed by the State Normal School for each of the years 1891 and 1892.

Salaries.....		\$42,330 00
Fuel.....	\$3,200 00	
General supplies.....	1,000 00	
Repairs.....	1,000 00	
Contingent.....	1,200 00	
Library.....	1,500 00	
Laboratory.....	300 00	
Museum.....	800 00	
Gas.....	400 00	
Commencement dinner.....	200 00	
Furniture.....	200 00	
Water.....	200 00	
Postage.....	150 00	
Diplomas.....	150 00	
Extra labor.....	150 00	
Pianos and organs.....	100 00	
Freight and express.....	100 00	
Board of visitors.....	100 00	
Telephone.....	80 00	
Training School and Kindergarten supplies.....	600 00	
Printing.....	500 00	
Advertising.....	100 00	
		11,530 00
		<u>\$54,860 00</u>

Estimated Receipts.

Admission fees.....	\$4,200 00	
Normal School Int. fund.....	4,300 00	
Diplomas.....	250 00	
Laboratory fees.....	150 00	
Interest on deposits.....	100 00	
		8,900 00
Balance to be appropriated by the Legislature.....		<u>\$45,960 00</u>

To this should be added for the year 1892 \$1,000 for Insurance which expires during that year.

Inventory of Property belonging to the Michigan State Normal School.

5 935-1000 acres of land.....	\$7,500 00	
Main Normal School Building.....	145,000 00	
One brick building used for Conservatory.....	8,000 00	
Boiler house.....	2,000 00	
Two out-houses.....	1,500 00	
		164,000 00
Library—10,986 volumes.....		<u>19,500 00</u>

Apparatus and Material in Laboratories.

Astronomy.....	\$367 00	
Mechanics.....	579 35	
Acoustics.....	162 25	
Heat.....	44 55	
Optics.....	313 46	
Magnetism and electricity.....	401 68	
Meteorology.....	72 00	
Chemical apparatus.....	218 20	
Chemicals.....	42 82	
Tools.....	188 00	
		2,634 31

Natural Science Department.

Cases and fixtures.....	\$340 00	
Apparatus for Laboratory work.....	223 85	
Entomological supplies.....	20 46	
Osteological preparations.....	399 75	
Models and casts.....	383 30	
Mounted specimens.....	1,062 75	
Microscopic accessories.....	666 79	
Shells, minerals, Indian relics, etc.....	493 70	
Alcoholic and dry vertibrate and invertebrate structures.....	186 95	
		<u>4,077 55</u>

STATE BOARD OF EDUCATION.

Mathematical Department.

One transit.....	\$100 00	
One level.....	75 00	
One compass.....	25 00	
One chain, 66 ft., and set of tally pins.....	8 00	
One chain, 33 ft.....	2 50	
One steel tape.....	7 50	
One leveling rod.....	12 00	
		\$250 00

Drawing and Geography.

Plaster casts.....	\$130 00	
Wooden models.....	60 00	
Relief models.....	40 00	
Globe.....	25 00	
Maps.....	100 00	
		355 00

Musical Instruments.

One pipe organ.....	\$3,000 00	
Two reed organs.....	125 00	
Six pianos.....	2,100 00	
		5,225 00

Furniture.

Book cases.....	\$184 00	
Clocks and bells.....	75 00	
Carpets, matting, rugs, curtains.....	1,017 00	
Desks.....	448 00	
Gas fixtures.....	1,087 50	
Maps, charts, pictures.....	400 00	
Tables, recitation seats, chairs, etc.....	7,230 00	
Stationery.....	50 00	
		10,491 50

Text Books.

Normal School.....	\$3,600 00	
		3,600 00

Steam Fitting.

Boilers, 8-16, 5 ft. shell.....	\$4,100 00	
" 1-13, 4 ft. shell.....	900 00	
One steam pump.....	135 00	
Tools, pipes, valves.....	200 00	
		5,335 00

Training School.

Anatomical apparatus.....	\$47 00	
Pamphlet cases.....	12 00	
Reading apparatus.....	20 00	
Object and form work.....	50 00	
Kindergarten apparatus and supplies.....	120 00	
Scales and measures.....	27 00	
Drawing apparatus.....	20 00	
Music charts.....	35 00	
Maps and globes.....	110 00	
Text books.....	800 00	
		741 00

Total.....	\$216,189 36	
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REPORT
OF THE
STATE LIBRARIAN

OF THE
STATE OF MICHIGAN,

FOR THE
YEARS JUNE 30, 1888, TO JUNE 30, 1890.



BY AUTHORITY.

LANSING:
ROBERT SMITH & CO., STATE PRINTERS AND BINDERS.
1891.

MICHIGAN STATE LIBRARY.

OFFICERS AND EMPLOYÉS.

MRS. HARRIET A. TENNEY, - - - State Librarian.
MRS. MARY C. SPENCER, - - - Assistant State Librarian.

MESSENGERS IN GENERAL LIBRARY.

WILL M. CLARK, - - - - to July 1890.
ALLEN B. FAILING, - - - - July 1, 1890 to ——.
JAMES W. TWAITS, JR. - - Messenger and Clerk in Law Dep't.

ALSON P. CORYELL, Janitor.

REPORT.

OFFICE OF THE STATE LIBRARIAN, }
Lansing, July 1, 1890.

To the Legislature of the State of Michigan.

Pursuant to the requirements of law, I have the honor to submit to your honorable body the following biennial report of this department of the public service.

This report covers the period commencing July 1, 1888, and closing June 30, 1890.

FINANCES.

State Librarian in account with the State of Michigan June 30, 1890.

	Dr.
To balance of appropriation for 1887-88.....	\$1,921 75
“ cash appropriation for 1889-90.....	6,000 00
Total.....	<u>\$7,921 75</u>
By cash paid for books, phamplets, maps and periodicals.....	\$6,890 09
“ cash on hand June 30, 1890.....	1,031 66
Total.....	<u>\$7,921 75</u>

The miscellaneous expenses of the Library have been audited and allowed by the Board of State Auditors, and the items and amounts thereof may be found in the annual reports of that Board.

STATISTICS.

Books, pamphlets, maps and periodicals purchased in accordance with the provisions of Act No. 47, Public Acts of 1889:

	Bound Vols.	Unbound Vols.	Pam- phlets.
By purchase for cash—Exhibit C.....	874	74	—
“ “ “ “ “ D.....	1,058	11	6
Total No. purchased.....	1,932	85	6
Inter-State exchanges received—Exhibit A.....	585	63	52
Donations received—Exhibit B.....	663	253	370
Total No.	1,248	316	422
Making a total of additions added to the Library.....			3,935

REPORT OF THE STATE LIBRARIAN.

EXCHANGE AND DISTRIBUTION.

Number of books and pamphlets received from the State of Michigan for exchange and for distribution, including United States Statutes—
Exhibit A:

Bound volumes.....	3,751
Unbound.....	875
Pamphlets.....	1,675

Total.....	6,301
Number of books and pamphlets withdrawn from the store room of the Library for exchanges, etc.....	10,206

UNITED STATES STATUTES.

United States Statutes distributed by virtue of Act No. 25, Public acts of Michigan, 1875.....	317
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EXHIBITS.

The titles of the books, pamphlets, maps, etc., received during the two fiscal years, from June 30, 1888, to June 30, 1890, may be found in the various exhibits herewith annexed and made a part of this report.

SUPREME COURT REPORTS.

The custody, distribution and sale of the Supreme Court reports, volumes 23 to 41 inclusive, first edition, also the annotated editions of volumes 23 to 37 inclusive, are by legal enactment placed in the care of the Librarian; also the custody and distribution of the copies of volume 42 and succeeding volumes that are the property of the State. The transactions of the Librarian in regard to these reports may be found in detail in the *Addenda* to this report.

MICHIGAN PIONEER AND HISTORICAL COLLECTIONS.

The Michigan Pioneer and Historical Collections are published in accordance with the provisions of Act No. 83, Public Acts of 1881; Act No. 51, Public Acts of 1883; Act No. 28, Public Acts of 1885; Act No. 80, Public Acts of 1887; and Act No. 88, Public Acts of 1889.

Volumes twelve and thirteen have been published since my last report. Volumes fifteen and sixteen are in press and the manuscript for volumes seventeen and eighteen is ready for the printer. The statistics relative to the receipt, sale, and distribution of these Pioneer and Historical Collections will be found in the *Addenda* to this report.

PRESENT CONDITION OF THE LIBRARY.

There are 56,568 books and pamphlets belonging to the Library that are stamped, labeled and placed upon the shelves of the Library for reference and use.

Of this number 4,712 are pamphlets containing less than fifty pages. Many of the pamphlets have been bound since received and are now counted as books.

There has been no special loss or damage to the books or property of the Library.

This biennial report closing June 30, many of the valuable and important books ordered have not yet been received and therefore cannot be included in this report, and the amount of appropriation on hand at this date will be used to pay for the same.

Large and valuable additions have been made to both the Law Department as well as to the General Library. Very many of the valuable and much needed books ordered have not yet been received and therefore cannot be included in this report. The balance of the appropriation on hand June 30 will be needed to pay for the same.

There is a constant and increasing demand for law text books, digests, reports, law periodicals and statute law that are not in the Library and can only be procured by purchase.

These books are for the use of the various legislative committees, especially the judiciary, and for the use of the supreme and circuit courts. They are also needed for the benefit of all persons having occasion to consult law books.

In the General Library books for reference and study are needed as much as in the Law Department.

APPROPRIATION.

The State Librarian most respectfully asks of the Legislature an appropriation of \$3,000 for each of the years 1891 and 1892, for the purchase of books, both law and miscellaneous.

EXCHANGES.

The number of books and pamphlets sent out during the two years ending June 30, as exchanges and donations, has been much larger than usual, for the reason that more interest is being taken by the librarians of the large libraries in the various states, to increase the usefulness and value of their libraries, and for that reason the public documents of Michigan have been asked for, and it certainly is to the advantage of the State to place them in all reference libraries so far as possible.

LIBRARY LEGISLATION.

A compilation of all the laws and regulations, and abstracts of such laws as pertain to the Library and the duties of the Librarian, are added to this report.

An examination of the laws and rules governing the various State and Territorial Libraries proves that they are established as reference libraries, especially for the use of members and officers of the Legislature, the courts of the States and the officers of the various State departments, in the transaction of their official duties.

Every person has the privilege of visiting these libraries for the purpose of consultation and study.

Respectfully submitted,

HARRIET A. TENNEY,
State Librarian.

LAWS AND REGULATIONS RELATIVE TO THE MICHIGAN STATE LIBRARY.

AN ACT to revise and consolidate the several acts relating to the care and management of the State Library.

(Public Acts 1881, No. 189.) (Amended Public Acts 1889, No. 106.)

SECTION 1. *The People of the State of Michigan enact*, That the State Library shall be kept in the room in the capitol which it now occupies until some other provision shall be made in reference thereto. It shall consist of the books, pamphlets, pictures, maps, charts, and documents of every description now belonging to the same, together with all such others as it may acquire by gift, purchase, exchange, or otherwise. The members of both houses of the Legislature and the executive and judicial officers of the State shall at all times have free access thereto, under such rules and regulations as may be made for the governing of the Library. The Governor, the joint committee on the State Library, and the State Librarian, shall make and execute, modify and amend, such rules and regulations, not conflicting with the statutes governing the Library, as they may deem proper, and also rules prescribing penalties and fines for any violation thereof. Such rules and regulations when adopted shall remain in force until modified or amended.

SEC. 2, amended. That a State Librarian shall be appointed by the Governor, by and with the consent of the Senate, who shall hold the office for the term of two years, whose salary shall be fixed at the sum of twelve hundred dollars per year, payable monthly, out of the State treasury, upon warrant of the Auditor General, and whose duty it shall be to have the sole care and charge of the Library, and the affairs pertaining thereto, and who shall make a biennial report to the Legislature at the commencement of each regular session thereof as to its condition and the number and description of the volumes contained therein.

SEC. 3. The State Librarian shall, before entering upon the duties of his office, file with the Secretary of State his receipt for all property entrusted to him, take and subscribe the oath of office prescribed by the constitution, and give a bond of ten thousand dollars, with sureties to be approved by the Secretary of State, conditioned for the safe keeping of such property as may be entrusted to his care; said bond and receipt shall be filed in the office of the Secretary of State, and they shall not be canceled until the receipt of his successor for the property delivered over to him shall be obtained, and payment for all deficiencies made.

SEC. 4. Before any member of the Senate, or of the House of Representatives, or of the Convention to revise the constitution, or other officer or employé of the State, who may be authorized by the rules of the State Library to draw books therefrom, shall receive their pay in full, it shall be necessary for such member, officer or employé to obtain and exhibit a certificate from the State Librarian, stating that such member, officer, or employé has returned all books he may have drawn, if any, from the State Library. It shall be the duty of all the State officers and heads of departments, before a final settlement with any employé in their respective departments that may resign or be discharged, to require such employé to obtain and exhibit the certificates above referred to, to the officers in charge of their respective departments.

SEC. 5. The publication of a biennial catalogue of all of the books and pamphlets in the Library shall be discontinued, and hereafter a biennial supplement to the catalogue shall be prepared by the Librarian, and printed for the use of the Legislature. One hundred copies of the biennial catalogue prepared for the years eighteen hundred and eighty-one and eighteen hundred and eighty-two and also of each biennial supplement, shall be retained in the Library for the use of the Library and the members of the Legislature. There shall not be printed of each biennial supplement to exceed five hundred copies. The State Librarian is hereby directed to prepare, or cause to be prepared, a manuscript card catalogue of all the books and pamphlets in the Library, and it shall be the duty of the State Librarian, on the receipt of any book or pamphlet, to at once catalogue the same in such card catalogue.

SEC. 6. The State Librarian shall exchange the judicial decisions, statutes, journals, legislative and executive documents of Michigan, and other books placed in the care of the State Librarian for the purposes of exchange, with the libraries of other States and the government of the United States, and of foreign countries, and with societies and institutions. The State Librarian may sell or exchange duplicate volumes or sets of works not needed for use in the State Library, and apply the proceeds to the purchase of other books for the Library.

SEC. 7, amended. The State Librarian is hereby authorized to appoint, with the advice and consent of the Governor, one assistant, who shall be known as Assistant State Librarian, and who shall give to the State Librarian a good and sufficient bond, approved by the Secretary of State, for the safe keeping of the property held in charge, and who shall take and subscribe the constitutional oath of office. It shall be the duty of the Assistant State Librarian to aid in the care of the books, in the keeping of the accounts, and in rendering such assistance as the State Librarian may require to properly perform the duties devolving by law upon that officer. The salary of the Assistant State Librarian shall be fixed at the sum of nine hundred dollars (per year), payable monthly, out of the State Treasury, upon the presentation of a voucher certified to by the State Librarian, and drawn upon the warrant of the Auditor General from any funds not otherwise appropriated. The Assistant State Librarian shall be at any time subject to removal, when, in the opinion of the State Librarian and the Governor, the interests of the State Library require it.

SEC. 8. All acts or parts of acts conflicting with this act are hereby repealed.

Ordered to take immediate effect.

Approved May 31, 1881, as amended May 23, 1889.

RULES AND REGULATIONS

FOR THE GOVERNMENT OF THE STATE LIBRARY, ADOPTED BY THE
GOVERNOR, JOINT COMMITTEE ON THE STATE LIBRARY,
AND THE STATE LIBRARIAN.

RULE I.

The Library shall be kept open every day except Sundays and the legal holidays.

During sessions of the Legislature, Supreme Court, and of Constitutional Conventions, the hours shall be from 8 o'clock A. M. to 9 P. M. At other times, from 8 o'clock A. M. to 12 M., and from half past 1 to 5 P. M. On Saturdays to 4 P. M.

RULE II.

The State Library is one of reference, and not a circulating library.

RULE III.

The Librarian and assistant shall be constant in their attendance upon the Library during the hours it shall be directed to be kept open and shall perform such other duties as may be imposed by law, or by the rules and regulations governing the Library.

RULE IV.

All persons are permitted to visit the Library and examine and read the books and magazines.

RULE V.

Members and officers of the Legislature; State officers and clerks in the several departments; Judges of the Supreme Court; resident members of the Board of Regents, and members of the State Boards; the President of the Agricultural College, and the Superintendent of the State Reform School, and School for the Blind, who apply in person for books for their own special use, shall be permitted to take from the Library any book or publication belonging thereto, excepting such as are books of reference, or on account of their value or rarity are by rule excluded from circulation.

RULE VI.

Any person wishing to obtain any book for perusal or reference in the general library must make application at the desk of the Librarian. The books thus received must not be taken from the Library, but be returned to the Librarian's desk, otherwise the person will remain responsible for the book. The Librarians will exercise a proper discrimination as to the delivery of such books as they may judge liable to be injured. Manuscripts, rare and valuable books and plates are excluded from this rule; they will be shown only on special application to the Librarian, and under such regulations as the circumstances of each case may in his or her judgment require.

RULE VII.

No book can be taken from the Library until its title and the name of the person taking it have been registered by the Librarian. A receipt must also be given by the person taking the book.

RULE VIII.

No book shall be taken from the seat of government, and no person shall take more than two books at the same time, or retain them from the Library for a longer period than two weeks.

Duplicate copies of laws and documents kept in the Library for the use of the members of the Legislature can be borrowed by members for use during the session.

RULE IX.

The following books shall be deemed books of reference, to-wit: All the books in the law department; and in the general library, all law books, dictionaries, encyclopedias, manuals, directories, registers, etc., newspapers, maps and engravings, pamphlet volumes, unbound magazines, and books which are valuable on account of their cost, rarity or antiquity.

RULE X.

During the sessions of the Legislature or of the Supreme Court the Governor, Attorney General, members of the Legislature, and Judges of the Supreme Court, may take to any room in the capitol any law book or book of reference; and lawyers in attendance on the Supreme Court, in the capitol, will be permitted to take such law books as they may wish into the Supreme Court room. But all books of reference must be returned within two days.

RULE XI.

No public officer or other person privileged to draw books, shall extend the privilege to others, or draw books from the Library for the purpose of loaning them to others. Any person violating this rule shall forfeit his own privilege to take books from the Library.

RULE XII.

Any person taking any book, map, or other publication from the Library shall be liable for all damages done thereto while in his or her possession, which damages shall be assessed by the Librarian, and paid to him or her by the person taking such book, map, or other publication.

Books must be handled with care. Leaves of books must not be turned down, and no marks, with ink, pencil, or anything made on the margins.

RULE XIII.

No person except the Librarian or assistants shall be permitted to take from or replace in the case, any book, map, or other publication.

RULE XIV.

Any member of the Legislature having in his possession any book, map, or other publication belonging to the Library, shall return the same four days before the adjournment of the Legislature.

RULE XV.

Three days before the adjournment of the Legislature, the Librarian shall report to the Senate and House of Representatives, the name of each member of the Legislature who has not returned *all* books, maps, or other publications taken out of the Library by such member, and settled and paid all accounts for fines, for injuring such books or otherwise.

RULE XVI.

Officers and clerks in the several departments must return all books in their possession, before leaving their position as an officer or employé of the State.

RULE XVII.

If on notice to any person that the time for which any book or books have been drawn from the Library by such person has expired, or if any person shall have in his or her possession any book or other article belonging to the Library, and shall neglect to return such book or other article to the Library for more than three days after such notice, such person shall be liable to pay to the State a sum equal to the value of such book or other article, which value shall be estimated at the cost of replacing the same.

RULE XVIII.

No person shall be allowed access to the Library at any time except in the presence of the Librarian or assistants.

RULE XIX.

Any person violating the rules of the State Library may be prohibited by the State Librarian from the use and privileges of the Library.

HARRIET A. TENNEY,
State Librarian.

Approved June 14, 1885.

T. D. HAWLEY,
S. M. STEPHENSON,
MANSON CARPENTER,
Senate Committee.

AMOS GARDNER,
E. B. HAYES,
N. A. BEECHER,
DANIEL BOYNTON,
HIERONYMUS ENGLEMAN,
House Committee.
RUSSELL A. ALGER, *Governor.*

SENATE CONCURRENT RESOLUTION.

February 20, 1885.

Resolved (the House concurring), That members taking books from the State Library when there is only one copy of the same work, be and they are hereby requested to return them the same day, or within twenty-four hours after receiving them from the State Librarian.

The House concurred, Feb. 23, 1885.

AN ACT making an appropriation for the purchase of Books for the State Library and for other purposes.

SECTION 1. *The People of the State of Michigan enact*, That the sum of three thousand dollars for the year one thousand eight hundred and eighty-nine and the sum of three thousand dollars for the year one thousand eight hundred and ninety, be and the same is hereby appropriated out of any money in the treasury of the State, to the credit of the general fund not otherwise appropriated, for the purchase of books for the State Library.

SEC. 2. The State Librarian is hereby authorized to employ, with the approval of the Governor, such temporary assistance during the session of Legislature as may be necessary for the care and management of the Library.

SEC. 3. The money so appropriated shall be drawn from the State treasury upon warrant of the Auditor General, and shall be expended by the State Librarian, with the advice and consent of the Governor, for the purpose aforesaid.

This act is ordered to take immediate effect.

Approved April 12, 1889.

ABSTRACTS

OF SUCH ACTS NOW IN FORCE AS RELATE TO THE PLACING OF CERTAIN BOOKS IN THE STATE LIBRARY, AND TO CERTAIN DUTIES PERTAINING TO THE OFFICE OF THE STATE LIBRARIAN.

LAWS AND DOCUMENTS.

The Public Acts of 1889, No. 122, requires "two hundred copies of the public acts of each session of the Legislature; one hundred copies of the local acts; one hundred copies of the journal of the Senate and House; one hundred and fifty copies of the joint documents; one hundred and fifty copies of the report of the Secretary of State relating to births, marriages and deaths; one hundred and fifty copies of the report of the Secretary of the State Board of Health; one hundred and fifty copies each of the agricultural and horticultural reports; also fifty copies additional of all reports bound in the joint documents, shall be placed in the State Library, by the Secretary of State, for use in said Library and for exchange.

The Public Acts of 1883, No. 173, and of 1889, No. 122, amending the acts relative to the publication and distribution of the agricultural and horticultural reports, requires a certain number to be distributed in the same manner as the joint documents, giving one hundred and fifty copies each to the State Library.

The Public Acts of 1883, No. 75, and of 1889, No. 90, authorizing the purchase and distribution of the General Laws of the State, compiled by Andrew Howell, provides that they be distributed in the same manner as the "Public Acts" of the State, giving to the Library two hundred copies.

The Public Acts of 1883, No. 146, authorizing the taking the census and statistics of the State provides for the publication, also for the distribution in the same manner as the joint documents of the State, giving one hundred and fifty copies to the Library.

LEGISLATIVE MANUAL.

The Public Acts of 1879, No 263, requires that the Secretary of State shall place "one hundred copies of each manual in the State Library, for the use of (in) said Library and for exchanges."

MICHIGAN IN THE WAR.

Michigan in the war is now distributed and sold by the Adjutant General instead of by the State Librarian.

MICHIGAN PIONEER COLLECTIONS.

The Public Acts of 1881, No. 83, 1883, No. 51, 1885, No. 28, 1887 No. 80, 1889, No. 88, require that: "Five hundred copies of each volume to be published as heretofore in this act provided for shall be deposited in the State Library of Michigan for exchange with the pioneer and historical societies of other States, governments, and countries; a further distribution of said volumes to be made by the officers of said pioneer society, to each of the duly incorporated public libraries in the State of Michigan, when demanded by the proper officers of said libraries, and the balance to be placed in the hands of the State Librarian to be sold at a price not less than seventy-five cents per volume, the proceeds to be deposited in the State treasury to the credit of the general fund."

MICHIGAN STATE PIONEER SOCIETY.

The Pioneer Society of the State of Michigan was organized under act No. 156, Laws of Michigan, 1873. The provisions relating to the State Library are as follows:

SEC. 6. Should a State association be organized under this act, it shall be the duty of the secretary of said State Society to make and transmit to the State Librarian a report of the transactions of said society, including copies of papers read at its meetings or contributed by its members of facts collected by correspondence or otherwise, at the end of the month September of each year.

SEC. 7. District or county, town, city, or village associations, organized under this act, are hereby required to report through their secretary in the month of September in each year, to the Secretary of the State association, the proceedings of said society during the year, giving copies of papers read at its meetings or contributed by its members during the preceding year; such report from district, county, town, city, or village societies, to be used in compiling the report of the State association provided for in section six. All collections of documents, periodicals, newspapers, books, maps, pictures, specimens, and curiosities which may be made by said State society, shall be placed in the *State Library* in charge of the *State Librarian*, and shall be regarded as belonging to the *State* whenever such society may be dissolved, or for any cause discontinue its organization.

UNITED STATES STATUTES.

AN ACT to provide for the distribution of the statutes of the United States furnished to this State by act of Congress, approved June 20, 1874.

(See Public Acts of Michigan, No. 25, 1875.)

SECTION 1. *The People of the State of Michigan enact*, That the State Librarian, upon the receipt of the statutes of the United States, furnished to the State as provided by act of Congress, approved June twenty, eighteen hundred and seventy-four, shall distribute one copy each to the offices of the Governor, the Secretary of State, the Auditor General, the State Treasurer, the Commissioner of the State Land Office, the Attorney General, the Commissioner of Railroads, the Insurance Commissioner, the Super-

intendent of Public Instruction; one copy each to the Justices of the Supreme Court, to each of the Circuit Judges and Judges of the Superior Courts of this State; and one copy to be kept in the office of the county clerk of each county in the State; ten copies to the State University, five for the general and five for the law library; one copy to the library of the Agricultural College; twelve copies to the State Library; in all cases the officers receiving the said statutes shall deliver them to their successors in office; and after retaining fifty volumes for future use, the balance, if any, may be distributed to the incorporated libraries and colleges of this State, upon application and payment of charges for the delivery of the same.

MICHIGAN SUPREME COURT REPORTS.

Abstracts of such laws now in force and relating to the distribution and sale of the reports by the State Librarian.

Laws of 1871, Vol. 1, Act No. 174, Section 6, relative to Volumes 23 to 41 inclusive.

"There shall be published fifteen hundred copies of each of said reports, which shall be deposited with the State Librarian,——"

Laws of 1873, Vol. 1, Act No. 137, Section 7, relative to the sale and exchange of Volumes 23 to 41 inclusive.

"The State Librarian may exchange any of said reports for such other reports or law books as shall be approved by the Chief Justice of the Supreme Court, which reports or other books procured by such exchange, shall be kept in the State library. After the publication of any volume under the provisions of this act, the State Librarian may sell the same at a price per volume not exceeding the actual cost to the State of publication thereof, to be determined by the Board of State Auditors, and twenty per cent added thereto. The State Librarian shall give a bond in the penal sum of five thousand dollars to the State, conditioned for the faithful performance of the duties imposed by this act. He shall keep an account of all moneys received by him for said reports, and shall pay the same monthly to the State Treasurer, who shall credit the same to the general fund. In case of sales to any one person, at one time, of twenty-five volumes or over, the twenty per cent aforesaid may be deducted from the selling price of such volumes."

Public Acts of 1879, No. 168, relative to the receipt of Volume 42 and subsequent volumes.

SEC. 8. Such contractor shall, within sixty days after receiving the final manuscripts of any volume from the reporter, deliver to the State Librarian at Lansing, free of cost, for publication or delivery, three hundred and fifty copies of such volumes in good order and according to contract.

Distribution of the Reports.

Public Acts of 1881, No. 116, relative to the distribution of the reports.

SEC. 11. That when each volume is published and delivered, the State Librarian shall distribute one copy each out of said three hundred and fifty volumes, to the offices of the Governor, the Secretary of State, the Auditor General, the State Treasurer, the Commissioner of the State Land Office, the Attorney General, the Superintendent of Public Instruction, the Commissioner of Railroads, and the Commissioner of Insurance, one

copy to each of the Justices of the Supreme Court, one copy to each of the Circuit and Superior Court, and Recorder's Court Judges of this State, one copy to the Probate Court of every county, and one copy to be kept in the office of the State Reporter, and one copy to each of the United States District Court Judges in Michigan, one copy to be kept in the office of county clerk of each county in this State, one copy to the library of the University of Michigan, one copy to the library of the Agricultural College, and one copy to the library of each of the States and Territories, which shall contribute to the Library of this State the law reports which shall be published under the authority of such State or territory.

Republication of the Reports.

Public Acts of 1881, No. 40, relative to the republication and sale of certain reports.

SEC. 9. Such contractor, after receiving from the reporter or other person appointed by the chief justice, any volume of said reports with the aforesaid foot-notes or references, changes and corrections, shall, within ninety days, deliver to the State Librarian at Lansing, free of costs for publication or delivery, the copies of such volumes hereinbefore provided for, in good order and according to contract, who shall give his receipt therefor to the contractor when directed by the judges of the supreme court or a majority of them. Said contractor, at the time of delivering said copies to the State Librarian, or within thirty days thereafter, should also deliver to the Secretary of State the stereotyped plates from which said volume or volumes were printed in good order and condition.

SEC. 10. Upon the delivery of said stereotyped plates to the Secretary of State, and upon producing and showing to him a receipt from the State Librarian, showing the delivery to him of the agreed number of copies of any of said volumes, and upon the authorization of the Board of State Auditors, under any contract made in pursuance of the provisions of this act, and the same shall be paid by the State Treasurer out of any funds in the State Treasury not otherwise appropriated.

SEC. 11. The State Librarian shall distribute one copy of any of said volumes to each of the various State and county officers of this State, to the United States District Court Judges in Michigan, to the various State institutions, and to the libraries of the different States and territories as directed by the Board of State Auditors: *Provided*, That in case any of said volumes heretofore published have already been distributed to State or county officers, State institutions, or the United States District Court Judges in Michigan, the same officers or institutions shall not be furnished with copies of the same volumes, republished under the provisions of this act, unless for good cause shown by the Board of State Auditors. He shall also sell the same at retail at a price not to exceed ten per cent above the actual cost to be determined by the Board of State Auditors, and in such quantities to book dealers as shall be fixed by the Board of State Auditors. He shall also give a bond, keep accounts, and pay over money received from the sale of said reports in the manner provided in section seven of chapter one hundred and eight, being compiler's section five thousand six hundred and fifty-seven of the compiled laws of eighteen hundred and seventy-one.

RELATIVE TO THE RECEIVING AND DISBURSING OF ALL MONEYS BY STATE OFFICERS.

The Public Acts of 1873, Vol. 1, No. 148, provides for the accounting of all moneys received and disbursed by any State officer, and for the making out and filing of all receipts, vouchers and accounts current made necessary for use by this act.

In accordance with the provisions of this act the State Librarian is required to take duplicate vouchers for all moneys disbursed by that officer, one to be filed in the office of the Auditor General and one in the office of the State Librarian; also to make out triplicate receipts for all moneys received by the same officer, one to be filed in the office of the Auditor General, one in the office of the State Librarian, and one to be given to the person or persons from whom the moneys are received; also to make out duplicate abstracts and accounts current of all moneys received and disbursed.

One set of all these is filed in the office of the Auditor General and one in the office of the State Librarian at the close of each month.

APPENDIX.

ADDITIONS MADE TO THE STATE LIBRARY FROM JUNE 30, 1888, TO JULY 1, 1890.

EXHIBIT A.

LIST OF INTER-STATE EXCHANGES.

	Vols.
ALABAMA.	
Acts 1888-9.....	1
Message of Gov. A. O. McNeal, Nov. 1886, pamphlet.....	1
Supreme court reports, vols. 83-90.....	5
ARIZONA.	
Act 1889.....	1
ARKANSAS.	
Acts 1889.....	1
Digest of statutes, 1884.....	1
Eagle, J. P. Inaugural address as Governor, Jan., 1889, 2 copies.....	1
Hughes, Gov. S. P. Message, 1889, pamphlet.....	1
Geological survey 1888, vols. 2, 3, 1888.....	2
Industrial university report, 1886-1888, 2 copies, unbound.....	2
Journal of House, 1889.....	1
Journal of Senate, 1889.....	1
Public documents, 1887-8.....	1
ARKANSAS.	
Supreme court reports, vols. 44, 45, 46, 47, 48, 49, 50, 51.....	7
CALIFORNIA.	
Governmental roster, 1889.....	1
State library catalogue, (Gen. dep't.) 1889.....	1
Report, 1886-8. Sacramento, 1888, pamphlet.....	1
State mineralogist, report, 1888, 2 copies, 1889.....	3
Statutes and amendments to codes, 1889.....	1
Supreme court reports, vols. 73-82.....	10
University register, 1889-90.....	1
Waterman, Gov. R. W., message, Jan. 1889.....	1
CANADA DOMINION.	
Agricultural Colleges and experimental farm stations; W. Saunders, unb.....	1
Budget speech, by Hon. G. E. Foster, 1889, unb.....	1

CANADA DOMINION (*Continued*).

	Vols.
Budget speech, by Hon. C. Tupper, 1888, unb.....	1
Canadian archives, report. Douglas Brymner, 1888, 1889, unb.....	2
Colonial and Indian exhibition, 1886, unb.....	1
Geological and natural history survey, U. S., vol. 2, 1886.....	1
Maps, 3-7, to same.....	-
Vol. 3, parts 1, 2, 1887-8.....	2
Maps to same.....	-
Holiday rambles between Winnipeg and Victoria. George Bryce, unb.....	1
Parliamentary companion, 1889.....	1
House of Commons, Debates, 1888, pamphlet.....	1
House of Commons, Journal, vol. 22, 1888; vol. 23, 1889.....	2
House of Commons Journal, vol. 22, appendix.....	1
Senate Journal, vols. 22, 23, 1888-1889.....	2
Senate Journal, vol. 22; appendix.....	1
Sessional papers, 2d session; 6th parliament, 1888; vol. 20, nos. 15, 17-20.....	1
Vol. 21, nos. 1-4; no. 5, 4a; nos. 6, 4b-4d; nos. 7, 5-5a; nos. 8, 6-6b; nos. 9, 7-8b; nos. 10, 9-9a; nos. 11, 10-12e; no. 13; nos. 14, 16-16e; nos. 15, 17-27; nos. 16, 21-27; nos. 17, 28-78, in 17 vols.....	17
Sessional papers, 3rd session, 6th parliament, 1889: Vol. 22, nos. 1, 2, 3, 4, 4-4c; nos. 5, 5-5a; nos. 6, 5b-5e; nos. 7, 6-6e; nos. 8, 7-8a nos. 9, 9-10a; nos. 10, 11-11b; nos. 11, 12-13; nos. 12, 14-15a; nos. 14, 18-42; nos. 15, 43-82.....	15
Statutes, 1888, 2 vols; 1889, 2 vols.....	4
Supreme court reports, vols. 14-15. G. Duval, rep.....	2

MANITOBA PROVINCE.

Assembly journal, 1888, and sessional papers, 1-15.....	1
Crop bulletin, no. 22-23, June 1, Aug. 1889, pamphlet.....	1
Statutes, 1883, vol. 1, public general acts.....	1

ONTARIO PROVINCE.

Bureau of industries, report 1887.....	1
Law reports, vols. 14-15.....	2
Statutes, 1888, 1889.....	2

QUEBEC PROVINCE.

Legislative assembly journal, vol. 22, 1888.....	1
Legislative council journal, vol. 22, 1888.....	1
Statutes of Quebec, 1888, 1889.....	2
Sessional papers, departmental reports, 1888, vols. 21, 1, 2.....	2

COLORADO.

Acts, 1889.....	1
Agricultural College report, 1888.....	1
Agricultural Statistics, 1887, pamphlet.....	1
Cooper, Gov. J. A. Inaugural address, 1887, unb.....	1
Superintendent of public instruction, report, 1888.....	1
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DAKOTA (*Continued*).

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Acts, 1888-9.	2
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Statutes, 1889, unb.	1
Stevenson, Gov. E. A. Message, 1886, 1887-8 1888-9; pamphlet.	3

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Supreme court reports, vols. 70, 71, 72, 73, 74.	5

WYOMING.

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Commissioner of Fish and Fisheries.

- Fishery industries of the United States. Section 2, geographical view of fishery industries of the U. S., 1890; sections 3 and 4 in 1 vol., fishing grounds of North America; section 5, history and methods, text, vol. 1, 2; plates to same..... 5
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Department of Agriculture.

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 Experimental station, bulletin, No. 4. List of horticulturists of agricultural experimental stations, Nov. 1889. Washington, 1889, pam..... 1
 Experimental station, bulletin, No. 5. Organization lists of agricultural experimental stations and colleges in United States, March 1890; unb..... 1
 Experimental station record, Sept. 1889; vol. 1, No. 1; March 1890; vol. 1, Nos. 3, 4, unb..... 3
 Journal of mycology, vol. 5, No. 4, Dec. 1889; vol. 6, No. 1, March 1890; study of fungi in relation to plant diseases, pam..... 1

Department of the Interior.

- Census 1880, vol. 12, mortality and vital statistics, part 2 with plates; vol. 17, water power, part 2; vol. 19, social statistics of cities, part 2; vol. 21, defective, dependent, delinquent, classes; vol. 22, power and machinery employed in manufactures and ice industry..... 5
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Senate executive, vol. 4, Nos. 69-77 inc., except Nos. 74, vol. 5, payment of awards under certain treaties, report U. S. Nicaraguan surveying party; vol. 6, Nos. 78-98 inc.; vol. 7, Nos. 100-153 inc.

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House executive documents: vol. 1, foreign relations, 1885; vols. 4, 5, report chief of engineers, 1885, parts 2, 3; vol. 6, No. 1, part 2, report secretary of war, 1885, vol. 2, engineers, part 4; vol. 7, report of chief of ordnance 1885; vol. 8, report of chief signal officer, 1885; vol. 9, report secretary of navy, 1885; vol. 10, report postmaster general, 1885; vol. 12, No. 1, part 1, report secretary of interior, 1885, vol. 2; vols. 14, 15, reports secretary interior, 1885, vol. 4, education; vol. 5, labor; vol. 16, report commissioner of District of Columbia, 1885; vol. 17, report of secretary of treasury, 1885, finance; vol. 18, report United States geological survey, and report secretary of treasury 1885; vol. 2, collection of duties; vol. 19, report of comptroller of currency; vol. 20, Nos. 4-20, except, 5, 18, 19; vol. 21, No. 5, estimates of appropriation, 1887; vol. 22, proposals for carrying mails, 1885; vol. 23, No. 18, report of coast and geodetic survey, 1885; vol. 24, commerce and navigation, 1885; vol. 25, Nos. 21-50 inc. except, 27, 29, 31, 49; vol. 26, No. 27, accounts of U. S. treasury 1885; vol. 27, No. 29, receipts and expenditures of U. S. 1880-82; vol. 28, No. 49, report on fortifications and other defenses; vol. 28, part 2, maps to same; vol. 29, cattle and dairy farming; vol. 30, Nos. 52-118, except, 62 and 116; vol. 31, Nos. 119-172, except 153; vol. 32, report of cruise of steamer Corwin in Arctic ocean; vol. 23, Nos. 173-290, except 176 and 253; vol. 34, commercial relations of U. S. 1885-6; vol. 35, Nos. 281-377, except 290; vol. 36, No. 290, production of precious metals in U. S., 1885; vol. 37, report of commissioner of agriculture, 1886.

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Forty-ninth congress, 2d session, 1886-87:

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Frye, Hon. W. P. Protection against free trade, n. p. n. d., pam.....	1
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The Technic, 1889, N. S. No. 2, n. p. n. d., pam.....	1

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Foster Home. Report, 1875, 1878. Newark, 1875, 1888, pams.	2
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Haynes, J. E. (Mayor of Newark). Messages, 1886, 1889. Newark, 1886-9, unb.	2
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Prime, S. L. Life, by W. L. Whitehead, n. p. n. d., pam.	1
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Windfalls. Philadelphia, 1889.	1
Ricard, F. W. English songs from foreign tongues. Newark, 1879.	1
Miscellaneous, unb., vols. 3, pams. 17.	20
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Boutwell, H. S. Progress of American Independence. New York, 1889, pam.	1
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Wellings, J. C. Land politics of United States. New York, 1888, pam.	1
<i>Norwood Institute, Washington, D. C.</i>	
Catalogue of institute, 1887-8. Washington, 1888, pam.	1
<i>O'Connell Monuement Trustees.</i>	
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<i>Olivet College, Olivet, Mich.</i>	
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<i>Oneida Historical Society, New York.</i>	
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Kennedy, J. H. Three witnesses of the book of Morman, n. p. n. d., pam.	1
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Alumni Oxoniensis. Members of Oxford University, 1715-1886, vol. 1. London, 1887.	1
<i>Philadelphia College of Pharmacy.</i>	
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<i>Pratt Institute, Brooklyn, N. Y.</i>	
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Report of directors of library, 1888, 1889. Newport, 1888-9, pams.	2
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Baxter, J. P. Early voyagers to America. Providence, 1889, pam.	1
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<i>Sage Library, West Bay City, Mich.</i>	
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<i>Saginaw, (Mich.) Board of Trade.</i>	
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<i>Salem, (Mass.) Public Library.</i>	
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<i>San Francisco Mercantile Library.</i>	
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Catalogue Yale University, 1888-9. New Haven, 1889, unb.	1
Catalogue Yale University, 1889 (in Latin), n. p. 1889, unb.	1
Obituary record of graduates of Yale college, 1867-1888, 1890, n. p. n. d., unb.	2
Observatory report, 1886-7, 1887-8, 1888-9; n. p. n. d., pams.	3
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Report of President of Yale University, 1887-8, 1889, n. p., 1889-90, pam. and unb.	2
<i>Newspapers—(Unbound).</i>	
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Allegan Journal and Tribune, June, 1888-90.	
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The Voice, July, 1888—June, 1890.	

EXHIBIT C.

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Abbott's patent laws of all nations.	1
Abbott's trial briefs in civil issues.	1

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Abbott's trial briefs on facts.....	1
Adams' judicial glossary, vol. 1.....	1
Addison on contracts, Abbott and Wood, 3 vols.....	3
Advocate, The, 1890.....	
Alabama acts, 1824, 1825-6, 1829-30; 1830-31; 1833-4; 1834-5; Jan. 1861; Oct. 1861, 1862, 1863, 1864, 1869-70.....	12
Brickell's digest of reports, vol. 3.....	1
Statutes, 1823, 1836.....	2
Albany Law Journal, 1888, 1889, 1890.....	3
American annual digest, 1887, 1888, 1889.....	3
American decisions, vols. 2, 3.....	2
American decisions, vols. 90-99.....	10
American law magazine, vol. 6.....	1
American law record, 15 vols.....	15
American law register, 1889, 1890.....	2
American law review, vols. 23, 24.....	2
American probate reports, (Beach) vols. 5, 6.....	2
American State reports, vols. 1-9.....	9
American and English corporation cases, vols. 17-27.....	11
American and English corporation cases, digest.....	1
American and English encyclopaedia of law, vols. 4-11.....	8
American and English railroad cases, vols. 30-40.....	11
American and English railroad cases, digest.....	1
Anderson's dictionary of law.....	1
Arkansas, Hopkins and Morgan's digest of reports, 2 vols.....	2
Arnold on law of marine insurance, 2 vols.....	2
Atlantic reporter, vols. 16-18.....	3
Atlantic reporter digest, vol. 1.....	1
Bacon on benefit societies and life insurance.....	1
Barber on insurance.....	1
Barber's notaries guides.....	1
Barbour on payments.....	1
Barbour on rights of persons and property, 2 vols.....	2
Bates on partnership, 2 vols.....	2
Bayless on new trial and appeals.....	1
Bayley on law of onus probandi.....	1
Beach on contributory negligence.....	1
Beach on wills.....	1
Benjamin, Chalmer's digest, bills, notes and checks.....	1
Benjamin on sale of personal property.....	1
Berryman's insurance digest.....	1
Biddle on law of warrents in sale of chattels.....	1
Bigelow on bills, notes and checks, 2d ed.....	1
Bigelow on estoppel, 5th ed.....	1
Bigelow on fraud.....	1
Bigelow on torts.....	1
Bigelow's overruled cases—supplement.....	1
Bingham on real property, vols. 1, 3.....	2
Bishop on insolvent debtors—supplement.....	1
Bishop on non-contract law.....	1
Black on law of tax titles.....	1
Blackburn on contract sale.....	1
Blackburn on tax titles, 5th edition; 2 vols.....	2
Blackwood's statutes, 1888, pts. 1, 2.....	2
Bolles on banks and depositors.....	1
Bovee on naturalization papers.....	1
British Columbia reports, vol. 1, pt. 1,.....	1
Brooks on law of heredity.....	1
Brown on divorce and alimony.....	1
Brown and Macnamara's railway cases, vols. 5, 6.....	2
Burbridge on Canadian criminal law.....	1
Buswell on limitation and adverse possession.....	1
California: Deming's statutes, 4 vols.....	4
Mayrick's probate reports.....	1
Canada law journal, 1889, 1890.....	2

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Canada law times, 1889, 1890.....	2
Carleton on homicide.....	1
Central law journal, vols. 27-30.....	4
Chicago Legal News, vol. 1.....	1
Chitty's equity index, vols. 6-8.....	3
Cincinnati law bulletin, 20 vols.....	20
Clark on extradition, 3d edition.....	1
Cobbey on law of replevin.....	1
Colorado: Morrison's digest of reports.....	1
Coltman's registry cases, 1879, 1880.....	2
Complete digest of reports, 1887-1889, 5 vols.....	5
Connecticut laws, 1828, 1829, 1830, 1832, 1834.....	5
Acts, 1796-1820, 2 vols.....	2
Statutes, 1796-1805.....	1
Cook on corporation statutes.....	1
Cook on stocks and corporations.....	1
Cook on trusts, 2d ed., 1888, pam.....	1
Cooley on torts, 2d ed.....	1
Copp's American mining code.....	1
Copp's mining laws and decisions.....	1
Coxe's common law practice.....	1
Coxe's criminal cases, vol., 16, pts., 5-7.....	3
Coxe's exercise for law students.....	1
Coxe's magistrates cases.....	1
Coxe's practice.....	1
Coxe's questions for students.....	1
Criminal law magazine and reporter, 1889, 1890.....	2
Croswell on executors and administrators.....	1
Curtis on patents, 4th ed.....	1
Curtis and Webster, digest of pension laws.....	1
Dakota: Herrick and Dowie, probate law, 2 vols., in 1.....	1
Deasy on removal of causes.....	1
Dickson's analysis of Blackstone.....	1
Dicy on parties to actions.....	1
Donovan on modern jury trial, 3d ed.....	1
Donovan on tact in court.....	1
Drake on attachments, 6th ed.....	1
Duryea on assignment of patent rights.....	1
Eggleston on law of damages.....	1
Endlich on interpretation of statutes.....	1
England: Dale's digest of English overruled cases, 2 vols.....	2
Law journal and reporter, 1889, 1890.....	4
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Law times and reports, 1889, 1890.....	4
Reports, 1887-1889, (in nos.).....	1
Reports, Moak's notes, vol., 38.....	2
Reports, statutes, 1885, 1886.....	2
Ewell on essentials of the law, 3 vols.....	3
Federal reporter, vol. 36 (Oct. 1888-Jan. 1889), 37-40.....	5
Federal reporter, digest, vol. 2.....	1
Field on infants, parent and child, guardian and ward.....	1
Field on law of ultra vires.....	1
Fiero on special pleadings.....	1
Finch, insurance digest.....	1
Florida, Choate's digest of reports.....	1
Forsen's digest of criminal law.....	1
Foster on federal practice.....	1
Freeman on executions, 2d ed, 2 vols.....	2
Gear on landlord and tenant.....	1
Georgia, Acts, 1860; 1861; 1862-3; 1864-5; 1871-2; 1872, 1873.....	7
Giaque on law of roads, bridges and ditches.....	1
Gilbert on criminal law.....	1
Godefroi on law of railways.....	1
Godefroi on trusts and trustees.....	1
Goodeve on patent cases.....	1

	Vols.
Gould on pleadings, 5th ed.	1
Gould and Tucker. notes on U. S. statutes	1
Greenleaf on evidence, 3 vols.	3
Grey on restraints on arbitration	1
Hare on American constitutional law	1
Harris on contracts of married women	1
Harris on criminal law	1
Harris on subrogation	1
Hawkins on wills	1
High on injunctions, 3d ed., 2 vols.	2
Hirsch U. S., digest of divorce law	1
Hocheimer on custody of infants	1
Holmes on common law	1
Holt on concurrent jurisdiction	1
Hore and Bemis, municipal police ordinances	1
Houck on navigable rivers	1
Houston on stoppage in transitu	1
Idaho, special statutes, 1863-87	1
Illinois' appellate court reports, vols. 21-24	4
Indian appeal reports, vol. 15, 1889	1
Indiana: Burns' digest of reports, 2 vols.	2
Laws, 1801-1806, (reprint)	1
Local Acts, 1836, 1838, 1839, 1840, 1841, 1842, 1846, 1848, 1850, 1851	10
Special acts, 1831	1
Supplement to statutes, 1889	1
Insurance law journal, 16 vols.	16
Iowa: Binmore's index, citation to Iowa reports, pts. 1, 2	2
Laws, 1843-4; 1845-6	2
Irish law reports, 1887, 1888, vol. 13, 21, 22	3
Law times, vol. 21, 22	2
Law times and reports, vol. 21	1
Jarmin on wills, vol. 3	1
Jones on bonds and mortgages, 2d ed., 2 vols.	2
Jones on chattel mortgages, 3d ed.	1
Jones on conveyancing	1
Jones on corporate cases	1
Jones on liens, 2 vols.	2
Jordan's questions on Anson on contracts	1
Journal of jurisprudence, vol. 25	1
Kansas: Private statutes, 1861	1
Dassler's digest of reports	1
Kents' commentaries, Barnes' ed., 4 vols.	4
Kentucky: Bullett and Feland; general statutes, 1888	1
Reports, vol. 14	1
Reports, Barbour's digest, supplement	1
Knapp on partnership of real and personal property	1
Law of U. S. and Canada, on telegrams, 2 vols.	2
Lawson, criminal law exemplified	1
Lawson, leading cases in criminal law	1
Lawson, leading cases in equity	1
Lawson on defenses to crime, 5 vols.	5
Lawson on rights and remedies, 5 vols.	5
Lawyers' code of ethics	1
Leake on law of real property, 3 vols. in 2	2
Legal news, vols. 10, 11	2
Lewes on eminent domain	1
Lewin on trusts and trustees, 1st Am. ed., 2 vols.	2
Lindley on partnership, 5th Eng. ed., 2 vols.	2
Lindley on partnership, 2d Am. ed., by Ewell, 2 vols.	2
Louisiana: Knobloch's digest of reports	1
Taylor's digest of reports	1
Voorhis' statutes	1
Lower Canada jurist, vols. 31, 32	2
Loyd on building and building associations	1
McClellan's surrogate practice, 3d ed.	1

	Vols.
Macdonnell's State trials, vol. 1	1
McKinney on fellow servants	1
Maine: Private laws, 1824, 1830	2
Public acts, 1823	1
Resolves, 1826, 1827, 1828, 1829, 1830, 1831	6
Acts and resolves, adjourned session, 1840, 1854	2
Marsdon on perpetuities	1
Martendale on conveyancing, 2d ed.	1
Massachusetts: Acts, 1742-1752; 1757	2
Laws, Jan. 1826	1
Statutes, 1742	1
Mathews' guide to public lands	1
Mathews & Co., digest to decisions U. S. department of interior	1
Mayer on damages	1
Mechem on agency	1
Mechem on public offices and officers	1
Merrill on newspaper libel	1
Metcalf on contracts, 2d ed.	1
Mews annual digest, 1888	1
Michigan: Jacobs and Chaney's, digest, 2 vols., 2 copies	4
Laws, 1816	1
Puterbaugh's common law practice	1
Tiffany's criminal law	1
Walker's chancery reports, new ed.	1
Miller on law of conditional sales	1
Mills on eminent domain, 2d ed.	1
Minnesota: Acts, 1855	1
Special acts, 1887	1
Statutes supplement, 1887	1
Mississippi: Acts, 1824, 1825, 1827, 1828, 1829, Jan. 1830; Nov. 1830; 1831; Jan. 1833; Nov. 1833; 1856-7, 1857, 1878. Called session, 1837	14
Statutes, 1824	1
Missouri: Court of appeals, reports, vol. 16	1
Stark's digest of reports, 3 vols.	3
Moore on rights on sea shore, 2 vols.	2
Morrell's bankruptcy reports, vol. 5, pts. 1-5; vol. 6, pts. 1, 2	7
Morrell's bankruptcy reports, digest, 1884-1887	1
Morrison's mining reports, vols. 10-15	6
Myers' federal decisions, vols. 14, 16-25	13
New Brunswick reports, vol. 26	1
New Brunswick statutes, 1888	1
New Hampshire acts, 1818, Jan. 1820	2
New Jersey: Minutes of convention, 1787	1
Public acts, 1823	1
New York: Abbott's new cases, vols. 20-23	4
Acts, 1816, 1817, 1820, 1823	4
Connelly's surrogate reports, vol. 1	1
Connelly's criminal reports, 8 vols.	8
Cowen's criminal reports, 2 vols.	2
Daly's reports, vol. 14	1
Danforth and Wicks, digest, court of appeals, 2 vols.	2
Demarest's, reports, vol. 6	1
Jones and Spencer, superior court reports, vols. 23, 24	2
Legal observer, 11 vols.	11
Statutes, 1889. 8th edition, 4 vols.	4
New weekly digest. 18 vols.	18
Newell on defamation and slander	1
Newmark on bank deposits	1
Niblock on voluntary benefit associations	1
North Carolina, Bott's digest of reports, vol. 5	1
Northeastern reporter, vols. 20-22	3
Northeastern reporter, digest, vol. 1	1
Northwest territory. Laws 1796, 1799, vol. 1; 1800, vol. 2; 1801, vol. 3	4
Northwestern reporter, vol. 40. (Nov. 1888-Jan. 1889) 41-43	4
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	Vols.
Nova Scotia reports, vols. 19., 20.....	2
Ohio: Curwen's statutes at large, 1833-1860; 4 vols.....	4
Goebel's probate law.....	1
General acts, vol. 32, 33.....	2
Local acts, 30, 31, 34.....	3
Law journal, 6 vols. in 7.....	7
Laws, vol. 82.....	1
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Pacific reporter, vol. 20, 21, 22.....	3
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Paine on contested elections.....	1
Parsons on law of costs.....	1
Parsons on marine insurance, 2 vols.....	2
Parsons on partnership.....	1
Patterson on restraints on State actions.....	1
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Brightley's digest of statutes, 1887; 3 vols.....	3
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Poor on referees.....	1
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Quebec law reports, vol. 14.....	1
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United States' government publications, monthly catalogue, 1888, 1889.....	2
United States' postal guide, 1889.....	1
Urquhart, D. The pillars of Hercules, 2 vols.....	2
VanHolst's constitutional history of the United States, vol. 6, 1856-99.....	1
Wagner, W. Epics and romances of the middle ages, 4th ed.....	1
Wagner, R. W. Life of, by G. L. Nohl, tr. G. P. Upton.....	1
Wallace, Lew. Lives of Benjamin Harrison and Levi P. Morton.....	1
Watson, A. Phillip II and III of Spain, 2 vols.....	2
Watson, J. T. Dictionary of poetical quotations.....	1
Weminger, F. X. Protection and infidelity, 7th edition.....	1
Westminster review, 1824-84.....	119
Wilhelm, E. and Lester C. W. The Napoleon dynasty.....	1
Willard, F. E. Glimpses of fifty years.....	1
William, the emperor and his reign. E. Simon, 2d ed.....	1
William of Germany. G. A. Forbes.....	1
William I and the German empire. C. B. Smith.....	1
Wilson, J. T. History of the Black Phalanx, etc.....	1
Winkworth, E. Christian singers of Germany.....	1
Winsor's narrative and critical history of America vols. 1, 7, 8.....	3
Woodward, A. Echoes from Mist Land, or the Nibelungen Lay, rev. ed.....	1
Yonge, C. Christians and Moors in Spain.....	1
Yriarte, Don T. De. Literary fables, tr. G. H. Devereux.....	1

ADDENDA.

DISPOSITION OF THE MICHIGAN SUPREME COURT REPORTS FROM JUNE 30, 1888, TO JUNE 30, 1890.

The following is the statement of the reports on hand and disposed of in accordance with the provisions of a resolution adopted by the Board of State Auditors, Dec. 31, 1874:

Michigan Supreme Court reports:

VOLUME 21.—No. of copies on hand June 30, 1888.....	7
No. distributed.....	3
No. on hand June 30, 1890.....	4

The following is a statement of the receipts and disposition of the reports under the provisions of sections 6 and 7, Act No. 174, session laws of Michigan, 1871, and section 7, Act No. 137, session laws of 1873:

VOLUME 23.—No. of copies on hand June 30, 1888.....	29
No. on hand June 30, 1890.....	29
VOLUME 24.—No. of copies on hand June 30, 1888.....	38
No. on hand June 30, 1890.....	38
VOLUME 25.—No. of copies on hand June 30, 1888.....	11
No. on hand June 30, 1890.....	11
VOLUME 26.—No. of copies on hand June 30, 1888.....	10
No. on hand June 30, 1890.....	10

VOLUME 27.—No. of copies on hand June 30, 1888.....	1
No. on hand June 30, 1890.....	1
VOLUME 28.—No. of copies on hand June 30, 1888.....	3
No. on hand June 30, 1890.....	3
VOLUME 29.—No. of copies on hand June 30, 1888.....	3
No. on hand June 30, 1890.....	3
VOLUME 30.—No. of copies on hand June 30, 1888.....	5
No. on hand June, 30, 1890.....	5
VOLUME 31.—No. of copies on hand June 30, 1888.....	5
No. on hand June 30, 1890.....	5
VOLUME 32.—No. of copies on hand June 30, 1888.....	4
No. on hand June 30, 1890.....	4
VOLUME 33.—No. of copies on hand June 30, 1888.....	0
VOLUME 34.—No. of copies on hand June 30, 1888.....	1
No. on hand June 30, 1890.....	1
VOLUME 35.—No. of copies on hand June 30, 1888.....	3
No. on hand June 30, 1890.....	3
VOLUME 36.—No. of copies on hand June 30, 1888.....	2
No. on hand June 30, 1890.....	2
VOLUME 37.—No. of copies on hand June 30, 1888.....	1
No. on hand June 30, 1890.....	1
VOLUME 38.—No. of copies on hand June 30, 1888.....	18
No. distributed.....	4
No. sold for cash.....	3
Cash received for same.....	\$7.00
No. on hand June 30, 1890.....	11
VOLUME 39.—No. of copies received by exchange.....	1
No. distributed.....	1
No. on hand June 30, 1890.....	0
VOLUME 40.—No. of copies on hand June 30, 1888.....	19
No. distributed.....	4
No. on hand June 30, 1890.....	15
VOLUME 41.—No. of copies received by exchange.....	1
No. distributed.....	1
The following is a statement of the receipts and disposition of the Michigan supreme court reports, under the provisions of section 8, Act No. 161, session laws, 1879; and section 11, Act No. 116, Public Acts, 1881:	
VOLUME 42.—No. of copies on hand June 30, 1888.....	59
No. distributed.....	4
No. on hand June 30, 1890.....	55
VOLUME 43.—No. on hand June 30, 1888.....	59
No. distributed.....	4
No. on hand June 30, 1890.....	55
VOLUME 44.—No. on hand June 30, 1888.....	65
No. distributed.....	4
No. on hand June 30, 1890.....	61
VOLUME 45.—No. on hand June 30, 1888.....	64
No. distributed.....	4
No. on hand June 30, 1890.....	60
VOLUME 46.—No. of copies on hand June 30, 1888.....	64
No. distributed.....	4
No. on hand June 30, 1890.....	60
VOLUME 47.—No. of copies on hand June 30, 1888.....	66
No. distributed.....	4
No. on hand June 30, 1890.....	62

VOLUME 48.—No. of copies on hand June 30, 1888	67
No. distributed.....	4
No. on hand June 30, 1890.....	63
VOLUME 49.—No of copies on hand June 30, 1888.....	65
No. distributed.....	4
No. on hand June 30, 1890.....	61
VOLUME 50.—No. of copies on hand June 30, 1888.....	66
No. distributed.....	5
No. on hand June 30, 1890.....	61
VOLUME 51.—No. of copies on hand June 30, 1888.....	64
No. distributed.....	4
No. on hand June 30, 1890.....	60
VOLUME 52.—No. of copies on hand June 30, 1888.....	64
No. distributed.....	4
No. on hand June 30, 1890.....	60
VOLUME 53.—No of copies on hand June 30, 1888.....	66
No. distributed.....	5
No. on hand June 30, 1890.....	61
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No. distributed.....	4
No. on hand June 30, 1890.....	61
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No. distributed.....	4
No. on hand June 30, 1890.....	61
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No. distributed.....	4
No. on hand June 30, 1890.....	62
VOLUME 57.—No. of copies on hand June 30, 1888.....	64
No. distributed.....	4
No. on hand June 30, 1890.....	60
VOLUME 58.—No. of copies on hand June 30 1888.....	64
No. distributed.....	4
No. on hand June 30, 1890.....	60
VOLUME 59.—No. of copies on hand June 30, 1888.....	76
No. distributed.....	6
No. on hand June 30, 1890.....	70
VOLUME 60.—No of copies on hand June 30, 1888.....	74
No. distributed.....	4
No. on hand June 30, 1890.....	70
VOLUME 61. No of copies on hand June 30, 1888.....	75
No. distributed.....	6
No. on hand June 30, 1890.....	69
VOLUME 62.—No. of copies received.....	350
No. distributed.....	280
No. on hand June 30, 1890.....	70
VOLUME 63.—No. of copies received.....	350
No. distributed.....	280
No. on hand June 30, 1890.....	70
VOLUME 64.—No. of copies received.....	350
No. distributed.....	279
No. on hand June 30, 1890.....	71
VOLUME 65.—No. of copies received.....	350
No. distributed.....	279
No. on hand June 30, 1890.....	71
VOLUME 66.—No. of copies received.....	350
No. distributed.....	279
No. on hand June 30, 1890.....	72

VOLUME 67.—No. of copies received.....	350
No. distributed.....	278
No. on hand June 30, 1890.....	72
VOLUME 68.—No. of copies received.....	350
No. distributed.....	279
No. on hand June 30, 1890.....	71
VOLUME 69.—No. of copies received.....	350
No. distributed.....	279
No. on hand June 30, 1890.....	71
VOLUME 70.—No. of copies received.....	350
No. distributed.....	279
No. on hand June 30, 1890.....	71
VOLUME 71.—No. of copies received.....	350
No. distributed.....	278
No. on hand June 30, 1890.....	72
VOLUME 75.—No. of copies received.....	350
No. distributed.....	278
No. on hand June 30, 1890.....	72
VOLUME 76.—No. of copies received.....	350
No. distributed.....	279
No. on hand June 30, 1890.....	71

The following is a statement of the receipts and disposition of the Michigan supreme court reports under the provisions of sections 9, 10, 11, Act No. 41, Public Acts, 1881:

VOLUME 23, <i>Second edition</i> .—No. of copies on hand June 30, 1888.....	207	
No. sold for cash.....	170	
Cash received for same.....		\$298 75
No. distributed.....	4	
No. on hand June 30, 1890.....	33	
VOLUME 24, <i>Second Edition</i> .—No. of copies on hand June 30, 1888.....	209	
No. sold for cash.....	169	
Cash received for same.....		295 25
No. distributed.....	4	
No. on hand June 30, 1890.....	36	
VOLUME 25, <i>Second Edition</i> .—No. of copies on hand June 30, 1888.....	480	
No. sold for cash.....	172	
Cash received for same.....		302 50
No. distributed.....	4	
No. on hand June 30, 1890.....	304	
VOLUME 26, <i>Second Edition</i> .—No of copies on hand June 30, 1888.....	551	
No. sold for cash.....	170	
Cash received for same.....		298 75
No. distributed.....	4	
No. on hand June 30, 1890.....	377	
VOLUME 27, <i>Second Edition</i> .—No of copies on hand June 30, 1888.....	555	
No. sold for cash.....	174	
Cash received for same.....		300 50
No. distributed.....	4	
No. on hand June 30, 1890.....	380	
VOLUME 28, <i>Second Edition</i> .—No. of copies on hand June 30, 1888.....	562	
No. sold for cash.....	171	
Cash received for same.....		300 50
No. distributed.....	4	
No. on hand June 30, 1890.....	387	
VOLUME 29, <i>Second Edition</i> .—No. of copies on hand June 30, 1888.....	565	
No. sold for cash.....	173	
Cash received for same.....		306 00
No. distributed.....	4	
No. on hand June 30, 1890.....	388	

VOLUME 30, <i>Second Edition</i>.—No. of copies on hand June 30, 1888	290	
No. sold for cash	167	
Cash received for same		\$294 75
No. distributed	5	
No. on hand June 30, 1890	118	
VOLUME 31, <i>Second edition</i>.—No. of copies on hand June 30, 1888	300	
No. sold for cash	169	
Cash received for same		298 50
No. distributed	4	
No. on hand June 30, 1890	127	
VOLUME 32, <i>Second edition</i>.—No. of copies on hand June 30, 1888	339	
No. sold for cash	174	
Cash received for same		307 25
No. distributed	4	
No. on hand June 30, 1890	16	
VOLUME 33, <i>Second edition</i>.—No. of copies on hand June 30, 1888	357	
No. sold for cash	181	
Cash received for same		320 25
No. distributed	4	
No. on hand June 30, 1890	172	
VOLUME 34, <i>Second edition</i>.—No. of copies on hand June 30, 1888	362	
No. sold for cash	175	
Cash received for same		309 25
No. distributed	4	
No. on hand June 30, 1890	183	
VOLUME 35. <i>Second edition</i>.—No. of copies on hand June 30, 1888	356	
No. sold for cash	175	
Cash received for same		310 00
No. distributed	4	
No. on hand June 30, 1890	177	
VOLUME 36. <i>Second edition</i>.—No. of copies on hand June 30, 1888	375	
No. sold for cash	177	
Cash received for same		312 75
No. distributed	4	
No. on hand, June 30, 1890	194	
VOLUME 37. <i>Second edition</i>.—No. of copies on hand, June 30, 1888	1,000	
No. sold for cash	618	
Cash received for same		1,086 50
No. distributed	147	
No. on hand June 30, 1890	235	

RECAPITULATION.

Total No. of copies sold for cash	3,054	
Cash received for same, and paid into State treasury		\$5,343 75
Total No. distributed	204	
Total No. on hand June 30, 1888	6,986	
Total No. received from printers since June 30, 1888	5,200	
Total	12,188	
Total No. disposed of	6,684	
Total No. on hand June 30, 1890	5,504	
Volume 40—Part 2, unbound on hand June 30, 1890	53	

MICHIGAN PIONEER COLLECTIONS.

VOLUME 3.—No. of copies on hand June 30, 1888	1,447	
No. sold for cash	12	
Cash received for same		\$9 00
No. distributed	83	
No. on hand June 30, 1890	1,352	

APPENDIX.

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VOLUME 4.—No. of copies on hand June 30, 1888.....	1,465	
No. sold for cash.....	12	
Cash received for same.....		\$9 00
No. distributed.....	63	
No. on hand June 30, 1890.....	1,390	
VOLUME 5.—No. of copies on hand June 30, 1888.....	1,568	
No. sold for cash.....	16	
Cash received for same.....		12 00
No. distributed.....	84	
No. on hand June 30, 1890.....	1,468	
VOLUME 6.—No. of copies on hand, June 30, 1888.....	1,568	
No. sold for cash.....	14	
Cash received for same.....		10 50
No. distributed.....	87	
VOLUME 7. No. of copies on hand June 30.....	1,608	
No. sold for cash.....	19	
Cash received for same.....		14 25
No. distributed.....	82	
No. on hand, June 30, 1890.....	1,507	
VOLUME 8. No. of copies on hand, June 30.....	1,821	
No. sold for cash.....	27	
Cash received for same.....		20 25
No. distributed.....	83	
No. on hand June 30, 1890.....	1,711	
VOLUME 9. No. of copies on hand, June 30.....	1,812	
No. sold for cash.....	28	
Cash received for same.....		21 00
No. distributed.....	90	
No. on hand June 30, 1890.....	1,694	
VOLUME 10. No. of copies on hand June 30, 1888.....	1,865	
No. sold for cash.....	37	
Cash received for same.....		27 75
No. distributed.....	88	
No. on hand, June 30, 1890.....	1,740	
VOLUME 11. No. of copies on hand June 30, 1888.....	1,871	
No. sold for cash.....	38	
Cash received for same.....		28 50
No. distributed.....	88	
No. on hand June 30, 1890.....	1,745	
VOLUME 12. No. of copies received.....	2,000	
No. sold for cash.....	50	
Cash received for same.....		37 50
No. distributed.....	192	
No. on hand June 30, 1890.....	1,758	
VOLUME 13. No. of copies received.....	2,000	
No. sold for cash.....	43	
Cash received for same.....		32 25
No. distributed.....	187	
No. on hand June 30, 1890.....	1,770	
VOLUME 14. No. of copies received.....	2,000	
No. sold for cash.....	16	
Cash received for same.....		12 00
No. distributed.....	178	
No. on hand June 30, 1890.....	1,806	

MICHIGAN STATE LIBRARY.

RECAPITULATION.

Total No. of copies.....	21,025	
Total No. sold for cash.....	312	
Cash received for same and paid into State treasury.....		\$234 50
Total No. distributed.....	1,305	
Total No. on hand June 30, 1888.....	19,408	

EIGHTH ANNUAL REPORT
OF THE
BUREAU OF LABOR
AND
INDUSTRIAL STATISTICS.

FEBRUARY 1, 1890.



BY AUTHORITY.

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ROBERT SMITH & CO., STATE PRINTERS AND BINDERS.
1891.

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ERRATA.

PAGE 65.—Table No. 2 should read Table No. 1.

PAGE 145.—Table No. 2 should read Table No. 1.

PAGE 231.—After word "Employee" in heading should be inserted the word "Canvassed."

PAGE 402.—J. R. Hailey should read J. R. Hiale.

LETTER OF TRANSMITTAL.

STATE OF MICHIGAN,
BUREAU OF LABOR AND INDUSTRIAL STATISTICS, }
Lansing, February 1, 1891.

HON. EDWIN B. WINANS,

Governor of Michigan:

DEAR SIR—In compliance with Section two, Act No. 156, Public Acts of Michigan, of 1883, I have the honor to transmit herewith the eighth annual report of this Bureau.

Very respectfully,

A. H. HEATH,

Commissioner of Labor.

B

INTRODUCTORY.

The information embodied in this report was obtained, not by the blank system nor by special canvassers, but by the regular office employés of this bureau, who, in person, visited all of the shops and factories enumerated and secured directly from each workman the facts desired. This involved the asking of about fifty questions of each employé canvassed. The work has been done in the most thorough and systematic manner. When necessary each question was fully explained to the men, so that an honest and intelligent reply might be given.

The workmen are beginning to understand the objects of the bureau, and, with but few exceptions, have willingly answered all questions asked, and frequently expressed a desire to aid in the work. The employers, too, have extended every courtesy to our canvassers, and the opposition formerly encountered through ignorance of the real purposes of the bureau has been overcome.

The canvass was mostly confined to the employés of the agricultural implement and iron working industries, although a few factories not coming properly under this classification were enumerated. These industries are among the oldest in our State, and are distributed throughout the southern half of the lower peninsula. Twenty-five towns and cities were visited, and as many of the employés engaged in the above industries as could be seen, were canvassed. The result of the work does not show all of the workmen so employed, as under the most favorable circumstances it would be impossible to obtain every employé.

In the industries canvassed the best of feeling exists between the workmen and proprietors. With the exception of the carpenters' strike in Detroit, there were no serious labor troubles in Michigan in 1890, and harmony prevailed between employés and employers, and this state of tranquility promises to continue.

The statistical work of the bureau is shown in the various tables which follow.

Tables Nos. 1 to 13, inclusive, give the individual reports of the employés enumerated. Each town and city is followed by a summary, giving the facts, in a condensed form, which were embodied in the table which preceded it.

Table No. 15 shows by towns and cities the number canvassed, number native and foreign born, number born of American parents, number born in the United States of foreign parents, number of weeks employed, average number of weeks employed, total annual and average annual earnings of those employés who are nineteen years of age and over, and those under nineteen years of age.

Table No. 16 shows the totals of the nationalities canvassed, by towns and cities, of tables Nos. 1 to 13, inclusive.

The result of the canvass has been condensed, by much labor, into the general summary which appears on the following page. This will be a great convenience to professional and business men, or busy men, who do not have the time to make a careful study of the tables.

GENERAL SUMMARY.

The work of the Michigan Bureau of Labor and Industrial Statistics during the year 1890, and embodied in this report (1891), consisted of a personal canvass and the enumeration of 8,838 workmen employed in 201 shops and manufacturing institutions in 25 villages and cities as follows: Detroit, 3,920; Battle Creek, 793; Grand Rapids, 776; Kalamazoo, 615; Lansing, 538; Bay City, 370; Jackson, 321; Albion, 197; Coldwater, 179; Dowagiac, 178; Muskegon, 143; Three Rivers, 139; Ann Arbor, 91; Plymouth, 88; Adrian, 75; Saginaw, 64; Montague, 60; Grand Haven, 47; Quincy, 45; Howell, 43; Tecumseh, 38; Ferrysburg, 35; Marshall, 30; Jonesville, 27; Buchanan, 26.

The industries canvassed were those engaged in the manufacture of various kinds of agricultural implements and iron working establishments. The particular lines of industry are enumerated in the summary by towns.

The enumeration of the 8,838 employes by nationalities resulted as follows: Americans, 5,091; Germans, 1,764; Canadians, 694; Irishmen, 277; Englishmen, 274; Hollanders, 221; Polanders, 157; Scotchmen, 130; Swedes, 53; Swiss, 41; Austrians, 26; Frenchmen, 25; Belgians, 19; Russians, 16; Danes, 15; Norwegians, 12; Italians, 5; Bohemians, 3; Prussians, Australians, Nova Scotians and Finlanders, 2 each, and New Zealand, on the ocean, West Indies, Alaska, Albania, Cuba and Mexico, 1 each.

Fifty-seven per cent were born in the United States and 43 per cent in foreign countries. (Throughout this report, in expressing per centage, only two figures are used, and the decimal dropped. Less than one per cent is not expressed.)

As shown in previous reports the foreign born workmen concentrate in the cities. Detroit greatly lessens the per cent of American born. Excluding that city the per cent of native born, (in this State) is increased to 69. Excluding Detroit, Grand Rapids and Lansing, the per cent is 73. The Germans are more generally distributed throughout the State than any other nationality. They predominate in the industries canvassed in all the places except Bay City, Battle Creek and Kalamazoo. In Bay City and Battle Creek the Canadians predominate and in Kalamazoo the Hollanders. The Germans number 47 per cent of the foreign born; Canadians, 18 per cent; Englishmen, 7 per cent; Irishmen, 7 per cent; Hollanders, 5 per cent; Polanders, 4 per cent; Scotchmen, 3 per cent; Swiss and Swede 1 per cent each;

all the other nationalities less than 1 per cent. The largest per cent of nationalities are in the following places: Germans in Albion, 80, per cent; Hollanders in Kalamazoo, 34 per cent; Canadians in Ann Arbor, 34 per cent; Irishmen in Battle Creek, 16 per cent; Scotchmen in Dowagiac, 10 per cent; Englishmen in Jackson, 26 per cent; Swiss in Battle Creek, 4 per cent; Swedes in Grand Haven, 12 per cent; Poles in Detroit and Grand Haven, 6 per cent each; Russians in Coldwater, 4 per cent; Austrians in Saginaw, 4 per cent.

An analysis of those reported born in the United States, gives the parentage: American, 2,947; German, 927; Irish, 528; English, 201; Canadian, 162; Holland, 95; Scotch, 80; French, 58; Polish, 39; Swiss, 18; Austrian, 12; Swede, 9; Belgian, 7; Norwegian, 3; Italian and Russian, 2 each; Hungarian, 1. This reduces the American born workmen to 2,947, or 33 per cent.

Of those born in the United States 58 per cent had American and 42 per cent foreign parents.

The Irish were the first race to immigrate to this country in large numbers, and have been here a longer term of years than the other nationalities; in consequence many of those reported as Americans had Irish parents. For the whole canvass only 277 Irishmen were reported or 7 per cent, while of the Americans 528 had Irish parents.

Four thousand eight hundred and eighty nine are married, 3,754 single and 195 widowers. 55 per cent are married, 43 per cent single and 2 per cent widowers. The highest per cent married is in Buchanan and Howell, each 81 per cent, and the lowest in Detroit, 48 per cent. The per cent is highest in the villages and lowest in the cities. One reason for the low per cent in the cities is the employment of boy labor. There is no "child" labor in the industries canvassed, but 235 boys are employed between 15 and 11 years of age, inclusive: Fifteen years of age, 148; fourteen years, 66; thirteen years, 17; twelve years, 3; eleven years, 1. None are employed under the age prohibited by law—under 10 years, and only 21 under 14 years. According to law all boys under 14 years of age are prohibited working more than 9 hours a day, and must attend school 4 months in the year. Kalamazoo and Detroit employ more boy labor than any other cities in the State. Under 14 years of age 1 each is employed in Lansing, Grand Rapids and Three Rivers; 7 in Kalamazoo and 11 in Detroit. 15 years of age and under: Jackson and Three Rivers, 2 each; Albion and Saginaw, 3 each; Bay City, 5; Coldwater, 9; Battle Creek and Lansing, 11 each; Grand Rapids, 12; Kalamazoo, 30; Detroit, 146.

Nearly 14 per cent of the total employes in the State are under 19 years of age: Detroit, 19 per cent; Kalamazoo, 18 per cent; Ann Arbor, Coldwater and Grand Haven, each 17 per cent; Marshall 14 per cent; Saginaw, 13 per cent; Grand Rapids and Quincy, each 12 per cent; Albion, Jackson and Lansing, each 11 per cent; Bay City, 10 per cent; Tecumseh and Three Rivers, each 8 per cent; Adrian and Plymouth, each 7 per cent; Battle Creek, Dowagiac and Ferrysburg, 6 per cent each; Montague, 5 per cent; Buchanan and Jonesville, 4 per cent each; Howell and Muskegon, 3 per cent each; 3,325, or 38 per cent, support self only; 327, or 4 per cent, support others than self by boarding, and 5,186, or 58 per cent, support families: Americans, 2,747; Germans, 1,185; Canadians, 389; Irishmen, 190; Englishmen, 188; Hollanders, 150; Polanders, 108; Scotchmen, 80; Swedes, 33; Swiss, 24; Frenchmen,

20; Austrians, 16; Belgians, 14; Russians, 10; Danes, 9; Norwegians, 7; Italians and Bohemians, 3 each; Prussians and Finlanders, 2 each; New Zealander, on the ocean, Nova Scotian, Mexican, Australian and Cuban, 1 each.

Of those supporting families, per cent by nationalities: Americans, 52 per cent, Germans, 22 per cent; Canadians, 7 per cent; Irishmen and Englishmen, each 3 per cent; Hollanders and Polanders, each 2 per cent; Scotchmen, 1 per cent, and all the other nationalities less than one per cent.

In 5,186 families there are 11,161 children, of whom 9,808 are supported. 951 married men have no children: Americans, 627 or 66 per cent; Germans, 139 or 14 per cent; Canadians, 65 or 6 per cent; Englishmen, 35 or 3 per cent; Irishmen, 25 or 2 per cent; Polanders, 18 or 1 per cent; Hollanders, 13 or 1 per cent; Scotchmen, 9; Frenchmen, 6; Swiss, 5; Russians, 3; Belgians, 2; Norwegian, Swede, Mexican and Austrian, one each. That 66 per cent of those who have no children are native born would seem to indicate that Americans are much less prolific than foreigners. That they are is a fact, but not to the extent indicated by the above, as under the head American are the many who were born in the United States but have foreign parents.

Of the children supported 3,484 are under 5 years of age; 6,124 are 5 years of age and under 20, and 200 are over 20 years of age. 4,249 attend school, which is 69 per cent of school age. 3,459 or 81 per cent attend the public schools; 757 or 17 per cent the parochial schools; 15 select schools and 6 commercial colleges.

Number of persons supported in families, 15,638; number supported by boarding, 505. 1,022 employes support 1,541 persons besides wife and children.

Number of weeks worked during the year, 404,570; average, 45.7 weeks. 5,939 men lost 50,877 weeks during the year, or 978 years and 21 weeks. Deducting the lost time the actual working day was 8 hours and 48 minutes. Causes for lost time: No work, 3,435 or 57 per cent; sickness, 822 or 13 per cent; sickness and no work, 651 or 10 per cent; vacation, 236 or 3 per cent; holidays, 150 or 2 per cent; short hours and no work, 121 or 2 per cent; no work and vacation, 87 or 1 per cent; no work and holidays, 75 or 1 per cent; short hours, 73 or 1 per cent; no work and accident, 68 or 1 per cent; accident, 65 or 1 per cent; not answered, 42; sickness and holidays, 39; at school, 38; sickness and vacation, 38; short hours and sickness, 17; at other work, 13; sickness and accident, 13; at work for self, 12; vacation and holidays, 12; sickness, short hours and no work, 8; accident and vacation, 5; short hours and vacation, 3; on a strike, 3; drunkenness, 2; accident and holidays, 2; sickness, accident and no work, 2; sickness, holidays and no work, 1; accident, holidays and vacation, 1; short hours, vacation and no work, 1. In compiling the above from the original blanks, no work, out of work, shut down, slack work and laid off have all been compiled as "no work;" sick, sickness and deaths, as "sickness;" vacation, away, resting and visiting as "vacation." If a farther condensation could be made, where no work is combined with other causes, at least 75 per cent of lost time would be on account of no work.

Total annual earnings, \$4,127,591.20; average, \$467.02. The lowest average annual wages is credited to Howell, \$312.46; and the highest to Muskegon, \$653.54. In the cities showing the highest average

annual wages, over \$500, Muskegon, Montague, Ferrysburg, Bay City, Saginaw, Dowagiac, Grand Rapids and Grand Haven, the industries canvassed were iron working establishments, employing those trades receiving the highest wages, such as machinists, molders, blacksmiths and boiler makers. This is the reason why the average is so much higher than in other towns. As an illustration: In the canvass of 143 men in the iron working trades in Muskegon, the average annual wages is given at \$653.54. In the same city in the canvass made the year previous of 122 men engaged in furniture making and wood workers, they only averaged \$416.39. In Grand Rapids the average for 776 men in the iron working industries is \$538.27. In the same city last year in a canvass of 2,929 furniture workers the average annual wages was \$426.93.

Total annual income from other resources, \$184,921, as follows: Family earnings, \$69,723; boarding, \$17,505; heirship, \$8,162; pensions, \$7,611; interest, \$15,823; rents, \$46,215; other sources, \$19,882. The total income from other resources only equal a little over 4 per cent of the total wages.

Total annual earnings of Americans, \$2,351,242.34; average, \$461.84; Germans, \$775,377.58; average, \$439.55; Hollanders, \$102,139.55; average, 462.17; Canadians, \$347,750.97; average, \$501.08; Irishmen, \$143,112.03; average, \$516.65; Scotchmen, \$74,982.20; average, \$576.78; Englishmen, \$154,886.80; average, \$565.28; Swiss, \$19,976.58; average, \$487.23; Norwegians, \$5,182.50; average, \$431.87; Swedes, \$30,774.60; average, \$580.65; Danes, \$7,648.50; average, \$509.90; Italians, \$1,875.30; average, \$375; New Zealander, \$312; average, \$312; Polanders, \$57,812.85; average, \$368.23; on the ocean, \$1,127; average, \$1,127; Nova Scotians, \$1,503; average, \$751.50; Frenchmen, \$15,013.30; average, \$600.53; Bohemians, \$2,038.50; average, \$679.33; Prussians, \$1,006.80; average, \$503.40; Mexican, \$624; average, \$624; Russians, \$7,175.50; average, \$448.43; Belgians, \$7,988.80; average, \$420.42; Austrians, \$13,502.50; average, \$519.32; Australians, \$1,638; average, \$819; Alaskan, \$624; average, \$624; Albanian, \$121; average, \$121; West Indian, \$195; average, \$195; Finlanders, \$1,151.50; average, \$575.50; Cuban, \$808.50; average, \$808.50.

The nationalities who number 60 and over in the canvass, are Scotchmen, Englishmen, Irishmen, Canadians, Hollanders, Americans, Germans and Polanders. The highest average wages received by nationalities is in order as just mentioned—the Scotchmen the highest and the Polanders the lowest. As much of the boy labor, and so many of those just beginning work are Americans, it brings down the average.

The average weekly wages of married men is \$11.50; single men, \$8.12; all employes in the canvass taken together, both married and single, \$10.06 per week, or \$1.67 $\frac{2}{3}$ per day. The actual wages paid per week, for man, is as follows: Twelve employes, \$2 each; two, \$2.25; one, \$2.32; eight, \$2.40; twenty-seven, \$2.50; one, \$2.60; one, \$2.70; four, \$2.75; one, \$2.85; one, \$2.87; one, \$2.95; two hundred and seventy-five, \$3; eight, \$3.25; fifteen, \$3.30; one, \$3.48; ninety-three, \$3.50; forty-eight, \$3.60; one, \$3.65; three, \$3.75; eight, \$3.90; one, \$3.95; ninety-three, \$4.00; twelve, \$4.20; one, \$4.40; one hundred and eighty-nine, \$4.50; one, \$4.60; one, \$4.61; two, \$4.75; twenty-seven, \$4.80; one, \$4.82; one, \$4.85; one hundred and four, \$5; seven, \$5.10; one, \$5.20; eight, \$5.25; eighteen, \$5.40; one, \$5.45; sixteen, \$5.50; one, \$5.60; one, \$5.70; one, \$5.75; one, \$5.80; seven, \$5.85; four hundred and forty-one, \$6; four, \$6.25; one, \$6.30; twenty-one, \$6.50; eighteen, \$6.60; one, \$6.70; thirty-five, \$6.75;

twenty-one, \$6.76; eleven, \$6.90; one hundred and forty-six, \$7.00; eight, \$7.20; ten, \$7.25; one, \$7.30; one, \$7.31; one, \$7.32; three, \$7.37; one, \$7.38; three, \$7.40; nine hundred and eighty-eight, \$7.50; one, \$7.60; three, \$7.75; nineteen, \$7.80; one, \$7.85; one, \$7.83; two, \$7.90; two hundred and ninety-four, \$8; forty-three, \$8.10; one, \$8.22; fifty-nine, \$8.25; two, \$8.30; one, \$8.37; fifty-six, \$8.40; seventy-nine, \$8.50; one, \$8.55, two, \$8.60; two, \$8.70 five, \$8.75; two, \$8.76; one, \$8.80; two, \$8.88; one thousand one hundred and fifty, \$9; four, \$9.25; one, \$9.40; one, 9.48; forty-three, \$9.50; twenty-four, \$9.60; one, \$9.62; two, \$9.65; one, \$9.70; thirteen, \$9.75; four, \$9.80; one, \$9.85; ten, \$9.90; three hundred and forty-eight, \$10; one, \$10.10; thirteen, \$10.20; four, \$10.25; one, \$10.40; five hundred and fifty-six, \$10.50; one, \$10.60; one, \$10.68; two, \$10.70; two, \$10.75; sixteen, \$10.80; one, \$10.90; eighty-six, \$11; five, \$11.10; one, \$11.20; six, \$11.25; fifteen, \$11.40; one \$11.43; sixteen, \$11.50; one, \$11.54; one, \$11.60; one, \$11.70; one, \$11.75; one, \$11.90; one thousand and forty-eight, \$12; one, \$12.11; two, \$12.15; one, \$12.20; two, \$12.30; twenty-two, \$12.50; one, \$12.57; fourteen, \$12.60; five, \$12.70; seven, \$12.75; two, \$12.80; four, \$12.90; ninety-two, \$13; one, \$13.15; six, \$13.20; four, \$13.25; one, \$13.40; four hundred and ninety-nine, \$13.50; two, \$13.75; one, \$13.80; one, \$13.84; one, \$13.85; sixty-five, \$14; three, \$14.10; four, \$14.20; eight, \$14.25; one, \$14.30; thirteen, \$14.40; one, \$14.48; nineteen, \$14.50; two, \$14.60; two, \$14.70; six, \$14.75; one, \$14.80, eight hundred and thirty, \$15; two, \$15.38; six, \$15.48; seven, \$15.50; eight, \$15.58; three, \$15.60; three, \$15.75; one, \$15.90; thirty-six, \$16.00; one, \$16.15; eighty, \$16.50; one, \$16.66; one, \$16.75; one, \$16.80; nine, \$17; one, \$17.25; two, \$17.30; one, \$17.50; one hundred and ninety-three, \$18; one, \$18.25; one, \$18.75; one, \$18.82; seven, \$19; four, \$19.20; ten, \$19.23; three, \$19.25; thirteen, \$19.50; one, \$19.80; one, \$19.90; twenty-nine, \$20; one, \$20.25; one, \$20.50; one, \$20.75; thirty-one, \$21; one, \$21.60; seven, \$22; seven, \$22.50; seven, \$23; two, \$23.07; one, \$23.08; one, \$23.50; seventeen, \$24; one, \$24.50; one, \$24.75; eleven, \$25; one, \$26; two, \$27; one, \$28; two, \$29; four, \$30; one, \$34.61; one, \$35; one, \$36; one, \$38.46; one, \$40.

Classified weekly wages: The number of employes who receive under \$5 is 840, or 9.5 per cent; \$5 but under \$6 is 166 or 1.87 per cent; \$6 but under \$7 is 553 or 6.25 per cent; \$7 but under \$8 is 1,188 or 13.44 per cent; \$8 but under \$9 is 551 or 6.23 per cent; \$9 but under \$10 is 1,255 or 14.2 per cent; \$10 but under \$12 is 1,081 or 12.23 per cent; \$12 but under \$15 is 1,842 or 20.84 per cent; \$15 but under \$20 is 1,228 or 13.89 per cent; \$20 and over, 134 or 1.51 per cent.

Total family expenses, \$2,550,521; per capita, \$122.48. As a matter of course the per capita is the highest in those towns where the best wages are paid. The merchants and business men receive the benefit from good wages, and the best interests of the whole community are advanced. The appearance of a town, whether prosperous or "dead," is the barometer of the wages paid.

The Scotchmen, Englishmen and the Americans, in the order named, are the best liver, and have the highest per capita of family expenses. The Poles and the Germans spend the least money. Expenses by nationalities: Americans, \$1,330,905; per capita, \$134.45; Germans, \$551,813; per capita, \$100.88; Hollanders, \$73,577; per capita, \$112.50; Canadians, \$209,371; per capita, \$129.64; Irishmen, \$105,007; per capita,

\$115.01; Scotchmen, \$51,715; per capita, \$143.25; Englishmen, \$105,747; per capita, \$135.92; Swiss, \$12,792; per capita, \$148.74; Norwegian, \$3,472; per capita, \$96.44; Swedes, \$18,607; per capita, \$112.77; Danes, \$4,452; per capita, \$106; Italians, \$1,156; per capita, \$68; New Zealanders, \$312; per capita, \$104; Polanders, \$42,583; per capita, \$89.46; on the ocean, \$1,000; per capita, \$333.33; Nova Scotians, \$700; per capita, \$175; Frenchmen, \$12,264; per capita, \$134.77; Bohemians, \$1,525; per capita, \$127.08; Prussians, \$1,033; per capita, \$114.77; Mexicans, \$574; per capita, \$287; Belgians, 6,162; per capita, \$97.81; Austrians, \$8,192; per capita, \$124.12; Russians, \$5,251; per capita, \$114.15; Australians, \$760; per capita, \$253.33; Finlanders, \$951; per capita, \$118.87; Cubans, \$600; per capita, \$150.

Two thousand three hundred and twenty-eight employes own homes of which 2,242 are married men, 46 per cent of married men own homes. Highest in Three Rivers, 63 per cent and the lowest in Marshall, 13 per cent.

Home owners by nationality: Americans, 1,145 or 49 per cent; Germans, 654 or 28 per cent; Canadians, 129 or 5 per cent; Irishmen, 92 or 3 per cent; Hollanders, 79 or 3 per cent; Englishmen, 69 or 2 per cent; Polanders, 45 or 1 per cent; Scotchmen, 39 or 1 per cent; Swede, 21; Swiss, 13; Austrians, 9; Belgians, 7; Russians, 6; Frenchmen, 6; Danes, 5; Norwegians, 2; Prussians, 2; Italians, 1; on the ocean, 1; Nova Scotian, 1; Bohemian, 1; Cuban, 1.

The Germans are the home owning nationality. 37 per cent own their own house and lot; 35 per cent of the Hollanders; 33 per cent of the Irishmen; 30 per cent of the Scotchmen; 28 per cent of the Polanders; 25 per cent of the Englishmen; 22 per cent of the Americans; 18 per cent of the Canadians.

Of the total number of home owners 2,242 or 96 per cent are married; 43 or 1 per cent are single and 43 or 1 per cent widowers.

Total value of homes, \$3,055,965; average, \$1,312.70. Detroit averages the highest, \$1,572.45 and Jonesville the lowest \$520. By nationalities: Americans, \$1,541,605; average, \$1,346.38; Germans, \$761,560; average, \$1,164.46; Hollanders, \$85,910; average, \$1,087.47; Canadians, \$190,450; average, \$1,476.35; Irishmen, \$152,800, average, \$1,660.87; Scotchmen, \$79,000; average, \$2,025.64; Englishmen, \$97,830; average, \$1,417.82; Swiss, \$13,965; average, \$1,074.23; Norwegians, \$2,400; average, \$1,200; Swedes, \$24,300; average, \$1,157.14; Danes, \$7,400; average, \$1,480; Italian, \$1,200; average, \$1,200; on the ocean, \$2,000; average, \$2,000; Nova Scotian, \$1,500; average, \$1,500; Bohemian, \$3,000; average, \$3,000; Prussians, \$2,700; average, \$1,350; Polanders, \$43,050; average, \$956.66; Frenchmen, \$12,000; average, \$2,000; Belgians, \$13,600; average, \$1,942.85; Austrians, \$9,600; average, \$1,066.66; Russians, \$7,095; average, \$1,182.50; Cuban, \$3,000; average, \$3,000.

The Scotchmen, Irishmen, Canadians, Englishmen and Americans, average the highest in the order named.

In the towns and cities outside of Detroit, the average age of those who own homes and have them paid for is 41 years; average age of those who own homes but are mortgaged, 36 years. The average wages of those employes outside of Detroit who own homes and have them paid for is \$12.29 per week; wages of those who own homes but who are mortgaged is \$11.20 per week.

The statement is frequently made that the workingmen who receive

the smallest wages are the ones who own their own homes. This may be so in individual cases, but the above figures prove that it is not true when home owning is considered as a whole.

The highest average weekly wages paid in the State to married men, \$11.50 per week; to all employes, \$10.06. It will be seen by this that those employes who have their homes paid for are those who receive good wages and above the average. It is also evident that unless a man who depends entirely upon his week's wages for a living, has secured a home, or has one partly paid for, by the time he is 41 years of age, he will never own one.

One thousand three hundred and forty-two homes are mortgaged, which is 58 per cent. The highest per cent of mortgaged homes is in Lansing and Albion, 71 per cent each and the lowest in Ferrysburg, 16 per cent.

Total value of mortgaged homes, \$1,630,360; amount of mortgages, \$614,485, which is 37 per cent of valuation.

Number mortgaged and amount by nationalities: Americans, 638; total, \$289,319; Germans, 428; total, \$191,559; Hollanders, 37 total, \$12,020; Canadians, 73; total, \$45,545; Irishmen, 40; total, \$16,935; Scotchmen, 22; total, \$11,930; Englishmen, 35; total, \$16,572; Swiss, 9; total, \$3,765; Norwegian, 1; total, \$300; Swedes, 7; total, \$3,350; Danes, 3; total, \$1,590; Italian, 1; total, \$900; Bohemian, 1; total, \$350; Prussian, 1; total, \$1,000; Polanders, 31; total, \$12,790; Frenchmen, 3; total, \$1,700; Belgians, 3; total, \$1,900; Austrians, 5; total, \$1,425; Russians, 4; total, \$2,435. Of the Polanders owning homes 69 per cent are mortgaged; Germans, 65 per cent; Scotchmen and Canadians, 56 per cent each; Americans, 55 per cent; Englishmen, 50 per cent; Hollanders, 46 per cent; Irishmen, 43 per cent.

During the year 1,390 employes made payments and improvements upon homes amounting to \$175,470, and 2,477 saved \$329,880 in money; 264 of the 1,390 who made payments and improvements on homes, also saved money, and are included in the 2,477 who saved money; hence, the total number who saved something during the year, including payments and improvements upon homes and money, is 3,603, which is 40 per cent of total employes. The highest was in Dowagiac, 71 per cent; and the lowest in Howell, 25 per cent. Total amount saved, \$505,350, which is 12 per cent of total earnings. Highest in Dowagiac, 19 per cent, and lowest in Jonesville and Marshall, 7 per cent each.

Total present worth of 7,474 employes (1,364 not reporting), \$6,154,774; average, \$950.98. Highest in Grand Rapids, \$1,319.71, and lowest in Jonesville, \$469.16. Only seven places, Grand Rapids, Tecumseh, Muskegon, Montague, Detroit, Battle Creek and Adrian, reported an average over \$1,000.

Total present worth by nationalities: Americans, 4,181; total, \$3,461,164; average, \$827.83; Germans, 1,521; total, \$1,130,240; average, \$743.09; Hollanders, 184; total, \$165,700; average, \$900.54; Canadians, 611; total, \$466,400; average, \$763.33; Irishmen, 257; total, \$301,880; average, \$1,174.63; Scotchmen, 115; total, \$152,865; average, \$1,329.26; Englishmen, 255; total, \$214,225; average, \$840.10; Swiss, 36; total, \$25,385; average, \$705.14; Norwegians, 10; total, \$6,000; average, \$600; Swedes, 50; total, \$50,345; average, \$1,006.90; Danes, 15; total, \$13,500; average, \$900; Italians, 4; total, \$950; average, \$237.50; New Zealander, 1; total, \$200; average, \$200; Polanders, 140; total, \$62,045; average, \$443.17; on

the ocean, 1; total, \$2,700; Nova Scotians, 2; total, \$2,100; average, \$1,050; Frenchmen, 23; total, \$18,180; average, \$790.43; Bohemians, 3; total, \$5,400; average, \$1,800; Prussians, 2; total, \$3,300; average, \$1,650; Russians, 15; total, \$11,295; average, \$753; Mexican, 1; total, \$1,000; Belgians, 17; total, \$17,815; average, \$1,047.94; Austrians, 24; total, \$24,485; average, \$1,020.21; Australians, 2; total, \$1,100; average, \$550; Alaskan, 1; total, \$12,000; Finlanders, 2; total, \$1,000; average, \$500; Cuban, 1; total, \$3,500.

The Scotchmen report the highest present worth, followed by the Irishmen, Hollanders, Englishmen and Americans.

Eighty-eight employés are reported to be worth over \$5,000; Detroit, 49; Battle Creek, 9; Grand Rapids, 7; Kalamazoo, 6; Adrian and Dowagiac, 3 each; Tecumseh and Albion, 2 each; Lansing, Ann Arbor, Bay City, Coldwater, Grand Haven, Muskegon, and Three Rivers, 1 each.

One thousand and forty six foreigners brought money with them when they came to the United States, amounting to \$176,354; average, \$168.57. Total present worth of foreigners (3,293 reporting) \$2,693,610; average, \$817.98. Total increase over total amount brought, 1,527 per cent.

Nationalities brought money: 446 Germans brought \$63,904; average, \$143.28; 70 Hollanders, \$6,401; average, \$91.44; 109 Canadians, \$41,313; average, \$217.43; 65 Irishmen, \$7,100; average, \$109.23; 51 Scotchmen, \$7,992; average, \$156.70; 101 Englishmen, \$33,311; average, \$329.80; 13 Swiss, \$1,310; average, \$100.77; 3 Norwegians, \$450; average, \$150; 29 Swedes, \$3,760; average, \$129.65; 7 Danes, \$1,050; average, \$150; 2 Italians, \$35; average, \$17.50; 41 Polanders, \$4,803; average, \$117.14; 10 Frenchmen, \$2,260; average, \$226; 1 Nova Scotian, \$50; 7 Russians, \$565; average, \$80.71; 5 Belgians, \$1,255; average, \$251; 1 Bohemian, \$200; 1 Australian, \$500; 3 Austrians, \$95; average, \$31.66.

Number renting homes, 2,634, or 29 per cent of total employés. Americans, 1,472, or 55 per cent of renters; Germans, 479, or 18 per cent; Canadians, 247 or 9 per cent; Englishmen, 116 or 4 per cent; Irishmen, 90 or 3 per cent; Hollanders, 64 or 2 per cent; Polanders, 57 or 2 per cent; Scotchmen, 38 or 1 per cent; Swiss, 10; Norwegians, 5; Swedes, 13; Danes, 4; Italians, 2; New Zealander, 1; Frenchmen, 12; Mexican, 1; Belgians, 6; Austrians, 7; Russians, 4; Bohemians, 2; Australian, 1; Finlanders, 2; Cuban, 1.

Two thousand five hundred and twenty-eight or 51 per cent of married men rent; 70 or 1 per cent of single men and 36 or 18 per cent of widowers. 59 employés have rent free. Of those who pay rent 95 per cent are married men, 2 per cent single men and 1 per cent widowers. 29 per cent of the total employés rent.

Total monthly rent, \$19,574.97; average, \$7.43. Total annual rent, \$234,899.64; average, \$89.17. Per cent of rent to earnings, 17; per cent of rent to expenses, 17. Total monthly rent of Americans, \$11,304.34; average, \$7.68; Germans, \$3,955.75; average, \$8.26; Hollanders, \$446.43; average, \$6.97; Canadians, \$2,128.90; average, \$8.62; Irishmen, \$766; average, \$8.51; Scotchmen, \$335; average, \$8.81; Englishmen, \$1,000.04; average, \$8.62; Swiss, \$83.50; average, \$8.35; Cuban, \$10; average, \$10; Norwegians, \$33; average, \$6.60; Swedes, \$100; average, \$7.69; Danes, \$28; average, \$7; Italians, \$12.50; average, \$6.25; New Zealander, \$4.50; average, \$4.50; Polanders, \$231.25; average, \$4.06; Frenchmen, \$91; average, \$7.58; Mexican, \$6; average, \$6; Belgians, \$39.50; average, \$6.58;

Austrians, \$64; average, \$9.14; Russians, \$27; average, \$6.75; Bohemians, \$25; average, \$12.50; Australian, \$10; average, \$10; Finlanders, \$12; average, \$6.

Number of employes boarding, 2,604, which is 29 per cent of total workmen.

One hundred and eleven or 1 per cent of total employes live at home and support the family; 106 or one per cent live at home and pay no stated amount for board; 10 live at home (all in Detroit) and pay no board. 988 or 11 per cent live at home and give their wages to their parents. In Grand Haven it is 23 per cent; Detroit, 17 per cent; Ann Arbor, 13 per cent; Grand Rapids, Saginaw and Kalamazoo, 10 per cent each; Bay City, 8 per cent; Albion, 7 per cent; Jackson, Coldwater and Adrian, 5 per cent each; Muskegon, 4 per cent; Lansing, Jonesville, Marshall and Three Rivers, 3 per cent each; Ferrysburg and Tecumseh, 2 per cent each; Dowagiac, Battle Creek, Montague and Plymouth, 1% each.

Total weekly board, \$9,254.64; average, \$3.55. Americans, 1,685 or 64 per cent of total number boarding; total, \$5,968.04; average, \$3.54; Germans, 351 or 13 per cent; total, \$1,203.85; average, \$3.43; Hollanders, 44 or 1 per cent; total, \$144; average, \$3.27; Canadians, 233 or 8 per cent; total, \$854.90; average, \$3.67; Irishmen, 81 or 3 per cent; total, \$305.65; average, \$3.77; Englishmen, 72 or 2 per cent; total, \$285.50; average, \$3.96; Scotchmen, 40 or 1 per cent; total, \$152.85; average, \$3.82; Polanders, 31 or 1 per cent; total, \$97.25; average, \$3.13; Swiss, 14; total, \$49.50; average, \$3.53; Norwegians, 3; total, \$11.60; average, \$3.86; Swedes, 19; total, \$72; average, \$3.79; Danes, 6; total, \$21.25; average, \$3.54; Italians, 2; total, \$6; average, \$3; Russians, 6; total, \$19.75; average, \$3.29; Frenchmen, 5; total, \$18.50; average, \$3.70; Belgians, 3; total, \$11; average, \$3.66; Austrians, 6; total, \$22; average, \$3.66; West Indian, 1; total, \$3; Australian, 1; total, \$4; Alaskan, 1; total, \$4. The English and Scotch average the highest board.

Seven hundred and sixty-three employes keep an itemized account of their expenses, which is 8 per cent. Highest in Howell, 23 per cent and lowest in Buchanan, Ferrysburg and Quincy. In the two former places none keep an itemized account and in the latter place only one person.

Three thousand, six hundred and twenty-seven persons own sewing machines, which is 69 per cent of those who support families. Highest in Jonesville, 93 per cent and the lowest in Detroit, 66 per cent.

One thousand, eight hundred and seventy-five own musical instruments, which is 21 per cent of total employes. Highest in Howell and Ann Arbor, each 42 per cent and lowest in Ferrysburg, 8 per cent. Total number of musical instruments, 2,046, of which 709 or 34 per cent are organs; 314 or 15 per cent pianos; 299 or 14 per cent violins; 243 or 11 per cent are guitars; 104 or 5 per cent horns; 92 or 4 per cent accordions; 66 or 3 per cent banjos; 44 or 2 per cent melodeons; 34 or 1 per cent flutes; 32 or 1 per cent cornets; 18 clarionets; 15 drums; 13 bass viols; 13 auto harps; 11 piccolos; 8 zithers; 4 each concertinas, fifes and cellos; 3 each mandolins, music boxes, organettes and harps; 2 each bugles and zylophones; 1 each dulcimer, harmonica and hand organ.

Number who take newspapers and magazines, 5,949, which is 67 per cent of total employes. Highest in Tecumseh, 87 per cent and lowest in Bay City and Grand Haven, each 53 per cent. 61 per cent of those

who take newspapers are Americans. Highest in Three Rivers, 95 per cent, and lowest in Ferrysburg, 37 per cent.

Taking papers by nationalities: Americans, 3,673 or 61 per cent of those taking; Germans, 941 or 15 per cent; Canadians, 510 or 8 per cent; Englishmen, 225 or 3 per cent; Irishmen, 193 or 3 per cent; Hollanders, 116 or 1 per cent; Scotchmen, 102 or 1 per cent; Polanders, 50; Swiss, 27; Swedes, 26; Frenchmen, 21; Austrians, 17; Norwegians, Russians and Belgians, 9 each; Danes, 8; Italians, Bohemians, Australians, Finlanders, 2 each; on the ocean, Nova Scotian, Prussian, Alaskan and Cuban, 1 each.

Per cent of nationalities taking newspapers and magazines: Englishmen, 82 per cent; Scotchmen, 78 per cent; Canadians, 73 per cent; Americans, 72 per cent; Irishmen, 69 per cent; Germans, 53 per cent; Hollanders, 52 per cent; Polanders, 31 per cent.

Number of newspapers and magazines taken, 9,924, as follows: Dailies, 5,103 or 51 per cent; story papers, 443 or 4 per cent; magazines, 343 or 3 per cent; religious papers, 330 or 3 per cent; scientific papers, 263 or 2 per cent; labor papers, 167 or 1 per cent; sporting papers, 66, and less than one per cent; miscellaneous, 19 and less than one per cent; local and all other weekly papers not classified as above, 3,190 or 32 per cent. It is evident that the daily paper is growing in popularity and becoming the universal medium for the dissemination of news and knowledge. There are 4,821 weekly papers and magazines taken, of which 9 per cent are story papers; 7 per cent magazines; 6 per cent religious papers; 5 per cent scientific papers; 3 per cent labor papers; 1 per cent sporting papers and 66 per cent are local weekly and other weekly papers not included in the above classification.

Two thousand four hundred and twenty-one men or 27 per cent work at hand and 5,816 or 65 per cent at machine work and 601 or 6 per cent at both.

Seven hundred and forty-nine have been injured while at work, since first engaged as employes, which is 8 per cent.

To the question: "Has your labor organization been of any financial benefit to you?" 1,212 made reply. 778 or 64 per cent of those answering said yes and 434 or 35 per cent said no.

To the question: "Has your labor organization been of any other benefit to you than financially?" 1,125 made answer. 457 or 41 per cent of those answering said yes and 668 or 59 per cent no. Of those answering yes 80 said that they had been benefitted educationally, 82 socially and educationally; 88 socially; 18 said their organization had made more harmony between employes and employer; 21, "got the emery wheel blower and did away with the buck system;" 24, gave better system of discounts; 144 said yes but did not state what benefit. The last four answers were given by Detroit workmen.

Two thousand, one hundred and sixteen carry life insurance, which is 23 per cent of total employes. Highest in Battle Creek, 51 per cent and the lowest in Plymouth, 5 per cent. Total amount of life insurance, \$3,150,313; average, \$1,488.80. Americans, 1,222 or 57 per cent of the number insured; total, \$1,945,706; average, \$1,592.23; Germans, 411 or 19 per cent; total, \$450,012; average, \$1,094.91; Canadians, 154 or 7 per cent; total, \$244,087; average, \$1,584.98; Englishmen, 91 or 4 per cent; total, \$147,308; average, \$1,618.76; Irishmen, 84 or 3 per cent; total, \$147,975; average, \$1,761.60; Scotchmen, 47 or 2 per cent;

total, \$80,090; average, \$1,704.04; Polanders, 24 or 1 per cent; total, \$11,675; average, \$486.45; Swiss, 19; total, \$18,925; average, \$996.05; Frenchmen, 9; total, \$12,900; Austrians, 8; total, \$12,750; average, \$1,593.75; Swedes, 7; total, \$15,100; average, \$2,157.14; Belgians, 4; total, \$7,725; average, \$1,931.25; Norwegians, 3; total, \$6,000; average, \$2,000; Bohemians, 3; total, \$4,600; average, \$1,533.33; Russians, 3; total, \$4,500; average, \$1,500; Dane, 1; total, \$2,000; Italian, 1; total, \$50; on the ocean, 1; total, \$2,000; Nova Scotian, 1; total, \$3,000; Prussian, 1; total, \$1,000; Alaskan, 1; total, \$500; Australian, 1; total, \$2,000.

The highest averages is given in the following order, of those nationalities canvassing over 100: Irishmen, Scotchmen, Englishmen, Americans, Canadians, Hollanders, Germans and Polanders.

Two thousand two hundred and forty-three or 25 per cent of total employes belong to benefit societies. Highest in Jackson, 65 per cent. In Buchanan, Grand Haven and Jonesville no workmen belong to benefit societies. Total weekly sick benefits, \$14,381; average, \$6.41. Americans, 1,092 or 48 per cent of those who are insured; total, \$7,348; average, \$6.73; Germans, 593 or 26 per cent; total, \$3,562; average, \$6; Canadians, 176 or 7 per cent; total, \$1,184; average, \$6.72; Englishmen, 100 or 4 per cent; total, \$647; average, \$6.47; Irishmen, 87 or 3 per cent; total, \$543; average, \$6.24; Polanders, 52 or 2 per cent, total, \$246; average, \$4.73; Scotchmen, 41 or 1 per cent; total, \$261; average, \$6.36; Hollanders, 34 or 1 per cent; total, \$176; average, \$5.17; Swiss, 20; total, \$115; average, \$5.75; Swedes, 12; total, \$62; average, \$5.16; Austrians, 10; total, \$66; average, \$6.60; Frenchmen, 8; total, \$52; average, \$6.50; Russians, 7; total, \$40; average, \$5.71; Norwegians, 3; total, \$15; average, \$5; Danes, 3; total, \$20; average, \$6.66; Italians, 2; total, \$10; average, \$5; Bohemians, 2; total, \$20; average, \$5; Belgian, 1; total, \$15.

Some of the inquiries made in previous reports have been discontinued, such as: "Are you paid in cash or trade?" "How often are you paid?" "How many hours for a day's work?" "Can you read and write?" "Are you subject to loss of wages by error, waste or breakage?" The former reports of this bureau show that the "truck" system has been done away with in Michigan, and that all manufacturing institutions pay cash. Pay day is either weekly, semi-monthly or monthly, according to the nature of the business. Ten hours is everywhere and in all kinds of establishments a day's work. The per cent of working men who cannot read and write is small—about 5 per cent. Only one per cent are subject to loss of wages by error, waste or breakage. The per cent is so small, and the result so universally the same, that further investigation of the above and a few other minor subjects, has been discontinued.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
DETROIT.

TABLE No. 1.—Showing the Individual Reports

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Causes for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
THE MICHIGAN STOVE CO.												
Molder	17	Germany	Germany	s						8		first work in U. S. no work shut down
"	19	"	"	s						39	13	
"	20	Canada	Canada	s				1	1	48	4	
"	19	U. S.	Germany	s				1	1	48	4	
Laborer	17	"	Poland	s						48	4	"
Molder	23	"	Ireland	s				7	7	31	21	no work
Laborer	16	"	U. S.	s						52		
Painter	17	"	Germany	s						48	4	shut down
"	17	"	Ireland	s						32	20	no work
Laborer	15	Poland	Poland	s						48	4	shut down
"	16	Germany	Germany	s						52		
Molder	21	U. S.	Poland	s				3	3	46	6	no work
"	18	Germany	Germany	s						42	10	"
"	21	Austria	Austria	s						39	13	"
"	21	"	"	s						44	8	"
"	18	Germany	Germany	s						48	4	shut down
"	20	Poland	Poland	s						48	4	"
"	23	"	"	s				2	2	48	4	"
"	19	Ireland	Ireland	s						48	4	"
"	20	U. S.	Germany	s						48	4	"
"	17	Ireland	Ireland	s						48	4	"
Stove mounter	20	U. S.	"	s						45	7	no work
"	20	"	U. S.	s						48	4	shut down
Laborer	18	Germany	Germany	s						36	16	no work
Stove mounter	17	"	"	s						48	4	shut down
Laborer	20	"	"	s						45	7	no work
Stove mounter	22	U. S.	"	s				2	2	18	34	"
"	18	"	Ireland	s						48	4	shut down
"	19	Germany	Germany	s				2	2	26	26	no work
"	20	U. S.	"	s						48	4	"
"	18	Germany	"	s						44	8	"
"	18	"	"	s						48	4	shut down
Machine hand	17	U. S.	U. S.	s						41	11	no work
Stove mounter	21	Germany	Germany	s						48	4	shut down
Machine hand	16	U. S.	U. S.	s						15	37	arm broken
Stove mounter	18	"	"	s						35	17	no work
Laborer	15	"	Poland	s						52		
Stove mounter	17	Germany	Germany	s						44	8	no work
"	18	"	"	s						35	17	"
"	14	U. S.	"	s						52		
"	21	"	Ireland	s				1	1	48	4	shut down
"	19	"	U. S.	s						44	8	no work
Molder	18	Austria	Austria	s						40	12	"
"	18	Germany	Germany	s						48	4	shut down
"	24	"	"	s				2	2	44	8	no work
"	21	"	"	s				2	2	42	10	"
"	19	Scotland	Scotland	s						31	21	"
"	23	England	England	s				1	1	46	6	sickness and shut down
"	18	Germany	Germany	s						48	4	shut down
"	19	"	"	s						48	4	"

of the Employees Canvassed in Detroit.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$6 00	\$48 00		\$48 00					*		*				2 mo.		
8 00	312 00		312 00					*		*				6		\$10
9 00	432 00		432 00	\$432					+++					10		75
9 00	432 00		432 00	432												75
5 10	244 80		244 80					*		*		1	\$5 00			
14 00	434 00		434 00	434					+			1	7 50			100
3 00	156 00		156 00					*		*						
3 50	168 00		168 00					*		*						
6 50	208 00		208 00					*		*						
3 30	158 40		158 40					*		*						
4 50	234 00		234 00					*		*				8		
8 00	368 00		368 00						+							40
6 00	252 00		252 00					*		*				9		
9 00	2,351 00	\$2,000	2,351 00					*		*				9		2,100
9 00	396 00		396 00					*		*				5		50
6 00	288 00		288 00					\$25		+				16		100
10 00	480 00		480 00								\$1,200			6		35
7 50	360 00		360 00	360					+					7		50
9 00	432 00		432 00					*		*				1 1/4		40
6 00	288 00		288 00					*		*						75
10 00	480 00		480 00					*		*				10		
10 50	472 50		472 50					*		*						75
7 50	360 00		360 00					*		*						100
9 00	324 00		324 00					*		*				6		
4 50	216 00		216 00					*		*				7		
4 80	216 00		216 00					*		*				17		55
9 00	162 00		162 00					*	+							40
6 00	288 00		288 00					*		*						1,000
6 00	156 00		156 00	156				*	+		1,200			9		50
6 00	288 00		288 00					*		*						20
6 00	264 00		264 00					*		*				17		
6 00	288 00		288 00					*		*						
4 50	184 50		184 50					*		*						
10 50	504 00		504 00					*		*		1	5 00	7		75
5 50	82 50		82 50					*		*						
7 50	262 50		262 50					*		*						
3 30	171 60		171 60					*		*						
6 00	264 00		264 00					*		*				16		
7 50	262 50		262 50					*		*	118			9		
3 30	171 60		171 60					*		*						
12 00	576 00		576 00	576				*	+			1	5 00			100
10 00	440 00		440 00					*		*		1	5 00			145
9 00	360 00		360 00					*		*		1	5 00	8		
6 00	288 00		288 00					*		*		1	5 00	6		
9 00	396 00		396 00	396				*	+					18		50
7 50	315 00		315 00	315				*	+					16		40
6 00	186 00		186 00					*		*				3		
13 50	621 00		621 00	621				*	+					21		300
8 00	384 00		384 00					*		*				7		
10 50	504 00		504 00					*		*				9		100

* Gives wages to parents and lives at home.

† Lives at home and supports family.

‡ Lives at home and pays no stated amount for board.

LABOR AND INDUSTRIAL STATISTICS.

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or Single.	Families.				Time.		Cause for loss of time.
		Where born (county).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Molder	20	Germany	Germany	s					48	4	shut down
"	21	"	"	s					35	17	sick
"	23	Canada	Ireland	s				4	48	4	no work
"	19	U. S.	"	s				3	48	4	shut down
"	20	Germany	Germany	s					48	4	"
"	18	Poland	Poland	s					48	4	"
"	19	Germany	Germany	s					48	4	"
"	22	U. S.	"	s					48	4	"
"	19	Germany	"	s			2	2	44	8	no work
"	20	U. S.	"	s					48	4	shut down
"	18	Germany	"	s					48	4	"
"	21	U. S.	Poland	s					48	4	"
"	22	Germany	Germany	s			2	2	45	7	no work
"	23	Poland	Poland	s			1	1	48	4	shut down
"	20	Germany	Germany	s					48	4	"
"	19	U. S.	England	s			1	1	32	20	no work
"	17	"	Germany	s					48	4	shut down
"	16	Ireland	Ireland	s					26	26	no work
"	25	Germany	Germany	s			2	2	48	4	shut down
Laborer.	18	"	"	s					48	4	"
Pattern fitter	16	U. S.	Ireland	s					39	13	no work
"	18	"	U. S.	s					52		"
"	16	Ireland	Ireland	s					52		"
Stove moulder	17	U. S.	Holland	s					52		"
"	24	Canada	Germany	s					48	4	shut down
Molder	22	"	Canada	s					52		"
"	26	U. S.	U. S.	s			2	2	48	4	shut down
"	20	"	Germany	s					48	4	"
Pattern fitter	24	"	Ireland	s			2	2	52		"
"	19	Germany	Germany	s					52		"
Buffer	23	"	"	s					48	4	shut down
Molder	26	Poland	Poland	s					48	4	"
"	20	U. S.	U. S.	s					39	13	sick
"	17	"	"	s					37	15	no work
"	20	"	Poland	s			1	1	43	4	shut down
"	27	"	France	s					48	4	"
"	26	Germany	Germany	s					26		first work in U. S.
"	18	"	"	s					48	4	shut down
"	23	U. S.	Austria	s					48	4	"
"	28	Germany	Germany	s					48	4	"
"	21	"	"	s					44	8	no work
"	25	"	"	s					39	13	"
"	22	U. S.	Ireland	s					39	13	"
"	19	Germany	Germany	s					39	13	"
"	21	Canada	Canada	s					48	4	shut down
"	21	Germany	Germany	s			1	1	47	5	no work
"	19	"	"	s					48	4	shut down
"	20	"	"	s					48	4	"
"	21	"	"	s					44	8	no work
"	27	"	"	s			1	1	48	4	shut down
"	24	"	"	s					25	17	no work
"	21	"	"	s					26	26	"
"	23	U. S.	"	s					48	4	shut down
"	22	Austria	Austria	s			2	2	48	4	"
Stove moulder	26	Ireland	Ireland	s					48	4	"

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$10 50	\$504 00		\$504 00					*		*				5	50
12 00	420 00		420 00	\$420					+++	*				18	50
15 00	720 00		720 00	720										8	68
8 00	384 00		384 00					*		*					25
10 00	480 00		480 00					*		*		1	\$5 00	3	100
8 00	384 00		384 00					*		*		1	5 00	7	600
9 00	432 00		432 00					*		*	\$700	1	5 00	4	50
11 00	528 00		528 00					*		*					50
9 00	396 00		396 00	396				*	†	*				7	50
9 00	432 00		432 00					*		*					100
7 50	390 00		390 00					*		*				3	40
9 00	432 00		432 00					*		*					75
10 00	450 00		450 00	450				*	+++	*				10	200
9 00	432 00		432 00	432				*	+++	*		2	10 00	5	50
8 00	384 00		384 00					*	+++	*		1	2 50	10	50
14 00	448 00		448 00	448				*	†	*		1	5 00		50
7 50	366 00		366 00					*		*					
6 00	156 00		156 00					*		*				15	30
15 00	720 00		720 00	720				*	†	*				9	
5 50	264 00		264 00					*		*				3	
4 50	175 00		175 50					*		*					
5 00	260 00		260 00					*		*					
4 50	234 00		234 00					*		*				2	
3 30	171 60		171 60					*		*					
9 00	432 00		432 00					\$50		†				22	75
9 00	468 00		468 00					150		†		1	5 00	5	200
21 00	1,008 00	\$40	1,048 00	548				200	†			1	7 50		1,200
10 50	504 00		504 00					00		†					2,000
13 00	936 00		936 00	436				500	†		2,000	1	7 50		25
4 50	234 00		234 00					00		\$3 50				16	1,000
8 00	384 00		384 00					00		3 50				8	40
6 00	288 00		288 00					00		3 00				6	20
8 00	312 00		312 00					00		5 00					200
6 00	222 00		222 00					00		4 00					
10 50	504 00		504 00					100		3 00		1	5 00		125
10 00	480 00	200	680 00					00		3 75		1	7 50		2,100
4 00	104 00		104 00					00		3 00				1/2	20
6 00	288 00		288 00					00		3 00				1	100
11 00	528 00		528 00					00		3 00		1	5 00		
13 50	648 00		648 00					175		4 00				15	800
15 00	660 00		660 00					100		4 00		1	5 00	9	400
12 00	468 00		468 00					00		3 50	100	2	10 00	7	75
7 50	292 50		292 50					00		3 50					25
6 50	253 50		253 50					00		3 00				17	50
10 00	450 00		480 00					150		3 50				4	200
10 00	470 00		470 00					00		4 00		1	5 00	17	75
11 00	528 00		528 00					00		4 00				18	60
9 00	432 00		432 00					00		3 50				5	30
10 00	440 00		440 00					00		3 50				8	150
10 50	504 00		504 00	454				50	\$7 75		2,000	2	10 00	10	500
7 50	262 50		262 50					00		3 25				2	100
8 00	208 00		208 00					00		3 00				5	50
13 50	648 00		648 00					00		5 00	2,000	2	10 00		100
9 00	432 00		432 00					00		4 00				19	30
12 00	576 00		576 00					00		4 50		1	7 50	9	

* Gives wages to parents and lives at home.

† Lives at home and supports family.

† Lives at home and pays no stated amount for board.

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Stove Mounter	24	Ireland	Ireland	s					28	28	sick
	26	Germany	Germany	s					48	4	no work
Laborer	18			s			2	2	39	13	
Stove Mounter	22	U. S.	Ireland	s					48	4	shut down
	24	"	England	s					48	4	"
"	23	Canada	Ireland	s					46	6	"
Machine Hand	16	Germany	Germany	s					52		
Stove Mounter	36	U. S.	U. S.	s			3	3	52		
"	29	"	"	s					52		
"	24	"	Belgium	s					48	4	shut down
"	24	"	Germany	s					48	4	"
"	25	"	U. S.	s			1	1	48	4	"
"	19	Germany	Germany	s					48	4	"
"	23	U. S.	"	s					48	4	"
"	19	Germany	"	s					48	4	"
Pattern Fitter	24	U. S.	Ireland	s					39	13	laid off
"	19	"	U. S.	s					22	30	taking a rest
"	25	"	Ireland	s					48	4	shut down
"	19	"	"	s					48	4	no work
Stove Mounter	26	"	Germany	s					35	17	"
"	27	"	Ireland	s					48	4	shut down
"	24	Germany	Germany	s					32	20	no work
"	16	U. S.	"	s					48	4	shut down
Pattern Fitter	19	"	U. S.	s					52		
Molder	21	Germany	Germany	s			1	1	48	4	shut down
"	19	"	"	s					39	13	no work
"	27	"	"	s					48	4	shut down
"	25	Canada	Ireland	s					48	4	"
"	24	U. S.	Germany	s					48	4	"
"	23	Austria	Austria	s					48	4	"
"	28	Canada	U. S.	s			2	2	44	8	no work
"	22	Poland	Poland	s					48	4	shut down
"	22	U. S.	Ireland	s					32	20	laid off voluntarily
"	25	Germany	Germany	s					42	10	sick and shut down
"	21	Ireland	Ireland	s					48	4	shut down
"	22	Germany	Germany	s					48	4	"
"	22	"	"	s					48	4	"
"	26	U. S.	U. S.	s					45	7	laid off voluntarily
"	25	"	Ireland	s			2	2	48	4	shut down
"	33	"	Germany	s					48	4	no work
"	22	"	Ireland	s					48	4	shut down
"	34	Poland	Poland	s			1	1	48	4	"
"	30	Germany	Germany	s			2	2	47	5	"
"	25	Austria	Austria	s			2	2	39	13	no work
"	32	U. S.	Ireland	s			1	1	43	9	sick and shut down
"	27	Ireland	"	s					48	4	shut down
"	25	U. S.	U. S.	s			1	1	48	4	"
"	29	Ireland	Ireland	s			1	1	48	4	"
"	28	Canada	"	s			3	3	48	4	"
"	23	England	England	s			1	1	44	8	no work
"	28	U. S.	Germany	s			1	1	48	4	shut down
"	23	Ireland	Ireland	s					48	4	"
helper	27	Germany	Germany	s					39	13	no work
"	20	Poland	Poland	s					48	4	shut down
"	22	U. S.	Germany	s					44	8	no work

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and Board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
10 00	\$260 00		\$260 00							\$4 50		1	\$7 50	18		\$100
12 00	576 00		576 00					\$50		5 00				17		100
8 00	312 00		312 00							5 00				11		150
20 00	480 00		480 00							5 00						150
12 00	576 00		576 00							4 00		1	7 50			
12 00	552 00		552 00					200		5 50	\$3500	2	22 50	10		1800
3 80	187 20		187 20							3 80				8		
27 00	1404 00	refuse	1404 00		refuse	refuse		1500		refuse						17000
15 00	780 00		780 00							3 50		1	5 00			200
10 50	504 00		504 00							2 50						75
10 50	504 00		504 00					60		4 50		1	7 50			300
12 50	648 00		648 00		\$548	\$1300		100			1000	1	5 00			1500
5 10	244 80		244 80							2 50				8		35
15 00	720 00		720 00					100		3 50	2000					200
15 00	720 00	\$8	728 00					75		3 00				18		500
13 50	526 50		526 50					150		4 50		1	7 50			300
10 00	220 00		220 00							4 00						200
12 00	576 00		576 00					50		5 00						125
6 00	288 00		288 00							3 50						50
12 00	420 00		420 00							4 00						150
10 50	504 00		504 00							6 00	2000					15
7 50	240 00		240 00							3 50				10		
6 00	288 00		288 00							3 00						
6 00	312 00		312 00							4 00		1	2 50			100
9 00	432 00		432 00	332	1000	\$400		100						7		800
7 50	292 50		292 50							3 50	119			2 1/2		30
9 00	432 00		432 00					50		3 50		1	4 00	8		100
13 00	864 00		864 00					500		3 50	2000	2	12 50	5	20	1200
10 50	504 00		504 00							3 75		1	5 00			100
9 00	432 00		432 00					25		3 50		2	9 00	7		75
15 00	660 00	300	960 00	660				300	\$8 00					27		1200
9 00	432 00		432 00							3 00	250	1	5 00	7		70
12 00	384 00	144	528 00					63		4 00		1	5 00			3500
10 00	420 00		420 00					300		3 50		1	7 50	9		900
12 00	576 00		576 00					400		3 50		2	10 00	8		500
15 00	720 00		720 00					150		4 50		2	10 00	9		400
12 00	576 00		576 00					150		3 00				16		400
7 50	387 50		387 50							4 00	100	1	5 00			300
20 00	960 00		960 00	960					no ans		1000	1	5 00			500
12 00	576 00	120	696 00					300	no ans	no ans		1	5 00			1800
15 00	720 00		720 00							4 00						80
10 00	490 00		490 00		480				3 00					8		50
12 00	564 00		564 00		564				3 00			1	5 00	6	70	100
10 50	409 50		409 50							3 50				9		50
18 00	774 00		774 00		750				8 00							500
12 00	576 00		576 00							4 00				5	5	200
16 00	768 00		768 00							7 00		1	7 50			100
20 00	960 00		960 00					200		4 50				10		2000
18 00	864 00		864 00						12 00		1000	2	12 50	8		200
13 50	594 00		594 00	494				100	8 00					11		175
21 00	1008 00	144	1152 00	952	1600			200			2000	2	10 00			2000
12 00	576 00		576 00					100		4 00				4	25	850
10 50	409 50		409 50							3 50		2	10 00	7		100
7 00	336 00		336 00							2 50				5		25
10 00	440 00		440 00							3 50						75

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Stove mounter	31	Germany	Germany	s						39	13	no work
Grinder	32	"	"	s						39	13	
Stove mounter	22	Poland	Poland	s						48	4	first work in U. S.
"	21	U. S.	U. S.	s						48	4	shut down
Laborer	22	Germany	Germany	s						48	4	"
Foreman	32	U. S.	U. S.	s			2	2	52			
Stove mounter	29	Germany	Germany	s			1	1	44	8		no work
"	22	U. S.	U. S.	s					48	4		shut down
Molder	22	Germany	Germany	s					48	4		"
"	19	Poland	Poland	s					48	4		
"	22	U. S.	U. S.	s					44	8		sick and no work
"	21	Poland	Poland	s					48	4		shut down
"	20	"	"	s			2	2	48	4		"
"	20	Germany	Germany	s					39	13		no work
"	21	U. S.	England	s					48	4		shut down
"	23	"	U. S.	s			2	2	39	13		sick and laid off
"	37	Germany	Germany	s					48	4		not answered
"	20	Austria	Austria	s			1	1	39	13		no work
"	23	Germany	Germany	s			2	2	40	12		sick and no work
"	19	U. S.	Ireland	s			2	2	32	20		no work
"	20	"	France	s					48	4		shut down
"	24	"	Ireland	s					25	27		no work
"	21	"	Germany	s					39	13		laid off
"	20	"	France	s					48	4		no work
"	25	"	Ireland	s			2	2	48	4		shut down
"	25	Germany	Germany	s					48	4		"
"	18	"	"	s					48	4		"
"	22	U. S.	U. S.	s					44	8		burnt foot
"	22	Poland	Poland	s					25	26		no work
"	23	U. S.	Ireland	s					50	2		"
"	20	"	Germany	s			1	1	48	4		shut down
"	30	"	U. S.	s					39	13		no work
"	21	Germany	Germany	s			2	2	46	6		sick and shut down
"	20	U. S.	Poland	s					35	17		no work
"	20	"	U. S.	s					35	17		"
"	19	"	Poland	s					49	3		"
"	19	Germany	Germany	s					46	6		"
"	17	Canada	Canada	s					6			first work in U. S.
"	21	Holland	Holland	s			2	2	48	4		shut down
"	23	Scotland	Scotland	s			1	1	48	4		no work
"	27	Germany	Germany	s					35	17		sickness
"	21	U. S.	U. S.	s					47	5		"
Laborer	18	"	Germany	s					44	8		no work
Electrotyper.	22	"	U. S.	s			4	4	52			"
Pattern filer	23	Canada	Canada	s					50	2		laid off
Carpenter	22	U. S.	Ireland	s					44	8		no work
"	30	"	"	s			4	5	52			"
"	23	"	"	s			4	4	47	5		shut down
Laborer	17	"	Germany	s					45	7		no work
Molder	21	"	"	s			2	2	40	12		burnt foot
"	20	"	"	s					42	10		shut d'wn and burn'd
"	27	"	"	s					48	4		shut down
"	26	Ireland	Ireland	s					8			first work in U. S.
"	21	Poland	Poland	s					48	4		shut down
"	19	U. S.	Germany	s					39	13		no work

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TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
22 00	\$351 00		\$351 00					\$40		\$3 50					\$250
00 00	234 00		234 00							3 50		1	\$5 00	6	50
00 00	234 00		234 00							3 50				1/2	5
00 00	240 00		240 00					15		4 00				7	50
00 00	238 00		238 00							3 50					
30 00	1,040 00	\$216	1,256 00	\$500	\$2,800	00	\$200					4	32 00		3,800
9 00	398 00		398 00							3 50		1	5 00	8	50
12 75	612 00		612 00							5 00		1	5 00		100
10 00	480 00		480 00							4 50				21	15
7 50	360 00		360 00							3 50				10	60
8 00	352 00		352 00							3 00		1	5 00		50
9 00	432 00		432 00					50		4 00		1	5 00	6	150
8 00	384 00		384 00							3 50		1	5 00	5	10
7 50	292 50		292 50							4 00				9	40
10 00	480 00		480 00					112		5 50		1	5 00		125
18 00	702 00	8	710 00					70		6 00		1	5 00		200
10 00	480 00		480 00					100		3 50		1	5 00		125
7 00	278 00		278 00							4 00				16	5
6 00	240 00		240 00							3 50		1	5 00	6	400
12 00	384 00		384 00							4 00				24	100
11 00	528 00		528 00							6 00					40
12 00	300 00		300 00							5 00					75
10 00	390 00		390 00							3 75	124	1	6 00		10
9 00	432 00		432 00							3 00	1,500	2	13 50		450
25 00	1,200 00		1,200 00					200		12 00	500				500
10 00	480 00		480 00					100		3 50		1	9 50	18	400
11 00	528 00		528 00					50		3 00				6	150
15 00	660 00		660 00					75		4 00					200
7 00	182 00		182 00							3 00				3	50
12 00	600 00		600 00							3 50	2,000				
10 25	492 00		492 00							6 00					70
17 00	663 00		663 00							4 00	150				150
8 00	368 00		368 00					85		3 00		1	5 00	7	50
7 00	245 00		245 00							3 50					100
6 00	210 00		210 00							3 50					60
7 50	367 50		367 50					200		3 00				4	800
7 50	345 00		345 00							4 00				6 wk	50
6 00	36 00		36 00							4 00				1	50
7 00	336 00		336 00	336								6		1	20
10 50	504 00		504 00					100		3 75		1	5 00	3	250
15 00	525 00		525 00							4 00				17	100
12 00	564 00		564 00					60		3 50					200
4 50	198 00		198 00							3 00					
12 00	624 00		624 00							5 00					100
10 00	500 00		500 00					200		4 00					250
12 00	528 00		528 00							4 00		1	6 00		1,000
18 00	988 00		988 00							3 50					500
10 50	493 50		493 50							4 50					250
7 00	315 00		315 00					75		3 00					100
9 60	384 00		384 00							9 00	140				
10 00	420 00		420 00							4 00		1	5 00		50
15 00	720 00		720 00					100		4 50		1	7 50		300
7 00	56 00		56 00							4 00				3	40
7 50	360 00		360 00							3 00				3	65
10 50	409 50		409 50							3 00		1	5 00		75

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	25	Germany	Germany	s						39	13	no work
"	23	U. S.	"	s						48	4	shut down
"	22	Germany	Poland	s						44	3	sick and shut down
"	20	"	Germany	s						49	3	no work
Metal polisher.	20	U. S.	"	s						48	4	shut down
Stove moulder.	18	"	Ireland	s						39	13	no work
Laborer.	28	Poland	Poland	s						30		first work in U. S.
"	18	Germany	Germany	s						48	4	shut down
Stove moulder.	24	U. S.	"	s						44	8	no work
"	19	Germany	"	s						30	22	"
"	18	"	"	s						46	6	"
Metal polisher.	28	U. S.	Ireland	s				2	2	35	17	"
"	21	Germany	Germany	s						35	17	"
Laborer	16	U. S.	Ireland	s						52		"
"	16	Germany	Germany	s						48	4	shut down
"	15	U. S.	Poland	s						48	4	"
Stove moulder	18	Canada	Ireland	s						39	13	no work
Molder	37	U. S.	Scotland	s				2	2	46	6	"
Laborer	15	"	Poland	s						52		"
Stove moulder.	19	"	Ireland	s						52		"
"	19	"	"	s						44	8	no work
"	18	Ireland	"	s						48	4	shut down
Laborer	19	Germany	Germany	s						48	4	"
Grinder.	21	U. S.	Belgium	s						26	26	no work
Stove moulder.	21	"	U. S.	s						26	26	"
Pattern fitter.	45	Austria	Austria	m	3	3	3			4	52	
"	40	Ireland	Ireland	m	1	1				2	52	
Molder	22	Poland	Poland	m	1	1				2	48	shut down
Stove moulder.	32	U. S.	Germany	m	4	4				5	47	"
"	25	"	U. S.	m	2	2		1	4	31	21	no work
"	27	"	"	m	3	3	1			4	39	18
"	33	Holland	Holland	m	3	3	2			4	48	4
"	32	U. S.	France	m	1	1				2	48	4
Pattern fitter.	35	Canada	Canada	m	2	2				3	52	
"	42	Holland	Holland	m	3	1				2	52	
"	28	U. S.	Ireland	m	2	2				3	52	
"	35	England	England	m	2	2	1			3	52	
"	39	U. S.	Germany	m	2	2	1			3	48	4
"	31	U. S.	U. S.	m	4	4	2			5	52	shut down
"	39	Holland	Holland	m	2	2	1			3	52	
"	32	France	France	m	1	1	1			2	48	4
"	54	Ireland	Ireland	m	2	2				1	52	
"	45	Germany	Germany	m	5	5	2	1		7	48	4
Molder	31	"	"	m	1	1				2	48	4
"	40	Poland	Poland	m	3	3				4	48	4
"	31	Germany	Germany	m	1	1				2	48	4
"	25	U. S.	U. S.	m	0	0				1	44	8
"	33	Poland	Poland	m	2	2				3	39	13
"	38	Russia	Russia	m	0	0				1	17	first work in U. S.
"	32	Germany	Germany	m	4	4	1			5	48	4
"	32	"	"	m	3	3				4	47	5
"	35	"	"	m	2	2	1	1		4	48	4
"	28	Poland	Poland	m	1	1				2	48	4
"	36	"	"	m	5	5	1			6	48	4
"	51	Scotland	Scotland	m	6	4	4			5	48	4

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$468 00		\$468 00					\$200		\$3 20				2	\$20	\$250
15 00	720 00		720 00							5 50						125
10 00	440 00		440 00							3 50		1	\$5 00			50
7 50	367 50		367 50					50		3 24			5 00	4		50
7 50	360 00		360 00					15		3 50				7		50
7 50	292 50		292 50							4 00						200
8 25	247 50		247 50					50		3 00				7 mos.		100
4 50	216 00		216 00							3 00				10		
6 00	254 00		254 00							3 50						100
7 50	225 00		225 00							3 00				5		50
6 00	276 00		276 00							3 00				2		40
15 00	525 00		525 00							4 00						60
10 00	350 00		350 00					*		*		1	5 00	9		
4 50	231 00		231 00					*		*						
3 50	168 00		168 00					*		*				3		
3 60	172 80		172 80					*		*						
7 50	292 50		292 50					*		*				3		
7 00	322 00		322 00	\$322				*	†	*						
3 00	171 60		171 60					*		*						
3 30	171 60		171 60					*		*						20
4 50	198 00		198 00					*		*						40
7 00	336 00		336 00					*		*				8		
6 00	288 00		288 00					*		†				10		75
7 50	195 00		195 00					*		†						40
9 00	234 00		234 00					*		†						35
18 00	986 00		986 00	986					\$12 00		\$1,250			28		3,000
13 50	702 00		702 00	600				100	10 00			1	5 00	9		508
6 00	288 00		288 00	288					3 50			1	5 00	4		50
9 00	423 00		423 00	423	\$700											1,000
10 00	310 00		310 00	310					7 00							400
22 00	858 00		858 00	800					10 00							600
10 50	504 00		504 00	435	1,000	\$100	\$50					1	5 00	6½		1,200
18 00	984 00	\$120	984 00	415	1,800	600	50	500			2,000	1	7 50			1,500
18 00	986 00		986 00	476	2,000	150	460				2,000	1	7 50	35		2,300
13 50	702 00	200	902 00	902					9 00					19		600
18 00	986 00		986 00	375	3,000		60	500				2	7 50	5	140	9,000
12 00	624 00		624 00	624	1,000	970						2	5 00			250
15 00	720 00		720 00	475	1,000			200	10 00		2,200	2	5 00			1,000
15 00	720 00		720 00	720					22 00							1,900
18 00	986 00		986 00	500	2,000	200	400				2,000	1	5 00	22		2,000
12 00	576 00		576 00	576					Free		2,000	2	10 00	19		500
21 00	1062 00	360	1452 00	950	5,000	1,000	200	225						35	40	5,300
12 60	604 80		604 80	604	2,000	700					2,000	2	12 50	20		1,900
9 00	432 00		432 00	400				25	4 50			1	5 00	7		800
10 00	480 00		480 00	300				100	10 00					4		300
13 50	648 00	60	708 00	450	1,300	800	200							8½	5	1,000
15 00	660 00		660 00	660					7 00		90	1	5 00			200
7 00	273 00		273 00	273					3 00			1	5 00	8		150
10 50	178 50		178 50							3 25				4 mos.	10	
10 50	504 00		504 00	504					3 00			1	4 50	8		400
7 00	329 00		329 00	329					3 50			1	5 00	9	10	150
8 00	894 00		894 00	800	1,400	600	50							10		1,000
7 00	336 00		336 00	336					5 00					5		300
12 00	576 00		576 00	576	400						800	1	5 00	13	50	800
30 00	1440 00		1,440 00	1,440	1,500						2,000	2	12 50	40		3,000

† Lives at home and supports family.

† Lives at home and pays no stated amount.

* Gives wages to parents and lives at home.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	24	Austria	Austria	m	1	1			2	48	4	shut down
"	27	Germany	Germany	m	1	1			2	48	4	"
"	25	U. S.	U. S.	m	1	1			2	48	13	laid off voluntarily
"	24	"	Ireland	m	1	1			2	39	4	shut down
"	28	Germany	Germany	m	1	1			2	35	17	no work
"	30	"	"	m	1	1			2	44	8	sick and shut down
"	22	"	"	m	1	1			2	48	4	shut down
"	22	U. S.	Ireland	m	3	3			6	46	6	sick and shut down
"	29	"	Germany	m	1	1			2	47	5	no work
"	44	Ireland	Ireland	m	10	9	4		10	48	4	shut down
"	25	Germany	Germany	m	3	3			6	46	6	no work
"	25	Ireland	Ireland	m	3	3			6	44	8	sick and shut down
"	38	U. S.	U. S.	m	3	3	2		5	48	4	no work
"	27	Canada	Canada	m	1	1			2	47	5	"
"	25	Germany	Germany	m	2	2			4	46	6	shut down
"	34	Poland	Poland	m	1	1		2	3	48	4	"
"	24	Germany	Germany	m	1	1		2	3	48	4	"
"	22	"	"	m	1	1		1	2	48	4	"
"	22	"	"	m	1	1		1	2	48	4	"
"	30	U. S.	Ireland	m	1	1	1		2	48	4	"
"	34	Germany	Germany	m	2	2		2	4	39	13	no work
"	22	"	"	m	1	1		2	3	39	13	sickness
"	34	Ireland	Ireland	m	3	3	1		4	48	4	shut down
Carpenter	39	U. S.	U. S.	m	3	4	2		5	52		
"	46	"	Ireland	m	4	4	2		6	48	4	no work
Foreman	42	"	Canada	m	1	1			2	52		
Pattern filer	32	"	France	m	1	1			2	52		
Laborer	42	Germany	Germany	m	4	3			7	48	4	shut down
"	53	"	"	m	1	1	1		2	22	30	sickness
"	53	"	"	m	1	1	1		3	44	8	no work
Molder	28	"	"	m	1	1			2	46	6	"
"	28	Poland	Poland	m	1	1			2	48	4	shut down
Blacksmith	28	"	"	m	1	1			2	48	4	"
Wood worker	45	Germany	Germany	m	4	4	1		5	52		
"	41	"	"	m	2	2			4	51	1	not ans.
Pipe fitter	32	U. S.	U. S.	m	2	2	1		3	52		
Ornamentor	22	"	"	m	1	1			2	49	3	shut down
Molder	39	Canada	Canada	m	6	6	4		10	26	26	no work
Laborer	30	Germany	Germany	m	3	3			6	42	10	"
"	40	Poland	Poland	m	4	4	2		6	48	4	shut down
Buffer	29	U. S.	Canada	m	2	2			4	50	2	"
"	41	Germany	Germany	m	4	4			8	32	20	no work
Molder	28	"	"	m	1	1			2	48	4	shut down
"	28	"	"	m	1	1			2	48	4	"
"	35	Poland	Poland	m	4	4	2		6	48	4	"
"	27	"	"	m	1	1			2	48	4	"
"	30	Germany	Germany	m	5	5	1		6	39	13	no work
"	38	Poland	Poland	m	5	5	1		6	39	13	sick
"	22	"	"	m	1	1			2	48	4	shut down
"	27	Germany	Germany	m	2	2			4	48	4	"
"	28	U. S.	"	m	3	3			6	48	4	"
"	35	Germany	"	m	5	5	2		7	44	8	sick and shut down
"	29	"	"	m	1	1			2	48	4	shut down
"	24	Poland	Poland	m	1	1			2	48	4	"
"	27	"	"	m	2	2			4	48	4	"

TABLE No. 1—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual Earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefits in case of sickness or accident.			
\$10 00	\$480 00		\$480 00	\$380	\$1,200	\$600	\$100					1	\$3 00	10		\$700
12 00	576 00		576 00	448										8		500
15 00	585 00		585 00	540												150
18 00	864 00		864 00	864							\$2,000	3	17 50			400
9 00	315 00		315 00	315								1	3 00	7	\$170	250
12 00	538 00	\$48	576 00	400	1,000	700	120					1	5 00	9	10	1,100
13 00	576 00		576 00	276				300	4 00		700	1	5 00	19		500
24 00	1,104 00		1,104 00	875	2,000	75	150									2,300
15 00	705 00		705 00	705	1,200							1	3 00			1,500
23 00	1,056 00	250	1,306 00	1,306					9 00		2,000	1	8 00	17		300
16 50	759 00		759 00	684				125	7 00		250	1	5 00	21		900
13 50	594 00		594 00	594					12 00			1	5 00	7	75	175
15 00	720 00		720 00	720					15 00							1,000
13 50	634 50		634 50	634					8 00					8	125	500
12 00	552 00		552 00	475	800	400	50							18		900
9 00	432 00		432 00	425					2 00			1	5 00	3		150
9 00	432 00		432 00	432					4 00			1	5 00	5	50	80
9 00	432 00		432 00	432					3 00			1	5 00	7		150
10 50	504 00		504 00	504					3 50					6		100
15 00	720 00		720 00	400	1,500	300	300									1,300
6 50	253 50		253 50	253					3 50					5		100
9 00	351 00		351 00	251	500	400	100					1	4 00	12		300
16 00	768 00		768 00	560	1,200	400	150				2,000	1	7 50	18		1,100
15 00	730 00		730 00	670	1,300	100	100									1,150
12 00	576 00		576 00	575				200	11 00							700
18 00	936 00		936 00	936	800	400						1	7 50			1,400
13 00	624 00		624 00	624					9 00							400
7 50	360 00		360 00	360					4 50						20	900
7 50	165 00	600	765 00	765	1,200						500	1	5 00	8		1,400
8 00	352 00		352 00	352					3 50					11		200
12 00	552 00		552 00	425	1,000	400	100							9		800
9 00	432 00	30	462 00	400	1,000	550	25							12		300
9 00	432 00		432 00	432					3 50					7		300
12 00	624 00		624 00	435	1,400	300	150				2,000	1	3 00	20	20	1,300
12 00	612 00		612 00	575	900			30				2	11 00	35		600
9 00	468 00		468 00	468					8 00							100
15 00	735 00		735 00	735	1,200											1,400
9 00	234 00		234 00	234					6 00					35		200
7 50	315 00		315 00	315					6 00					12		300
7 50	360 00	100	460 00	360	800	300	100							10	20	750
12 00	600 00		600 00	475	1,400	700	125									2,000
9 00	238 00		238 00	238					4 00		500			9	150	300
6 90	331 20		331 20	331					7 00		2,000	1	10 00	15		300
9 00	432 00		432 00	432					2 50					3		300
9 00	432 00		432 00	432					5 00					5		250
7 50	360 00		360 00	360					3 00					2 1/2		200
8 00	312 00		312 00	220	900	500	50				800	1	5 00	10		900
9 00	351 00		351 00	351					6 00			1		9		500
6 00	238 00		238 00	238					2 50					2		75
16 50	792 00		792 00	500	500	50	175					1	5 00	7		660
12 00	576 00		576 00	576	900	500						1	7 50			700
15 00	660 00		660 00	660	1,800							1	5 00	16		2,000
18 00	864 00		864 00	600	1,600	500		200			2,000	1	5 00	22		1,800
12 00	576 00		576 00	576					4 00			1	3 00	8		800
10 50	504 00		504 00	475					3 00			1	3 00	9		800

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	26	Germany	Germany	m	1	1			1	32	20	no work
"	22	"	"	m	1	1			1	48	4	shut down
"	40	"	"	m	3	3	2		4	48	4	"
"	29	"	"	m	2	2			3	44	8	no work
"	31	U. S.	"	m	3	3	1		4	48	4	shut down
"	27	Germany	"	m	1	1			2	48	4	"
"	29	"	"	m	1	1			1	48	4	"
"	25	U. S.	"	m	1	1			1	48	4	"
"	31	U. S.	U. S.	m	2	2	1		1	32	20	no work
"	33	Germany	Germany	m	4	4			5	48	4	shut down
"	32	"	"	m	2	2	2		3	48	4	"
"	24	"	"	m	1	1			1	48	4	"
"	23	"	"	m	1	1			1	48	4	"
"	32	U. S.	Ireland	m	1	1			1	46	6	no work
"	33	Germany	Germany	m	4	4	2		5	46	6	shut down
"	28	"	"	m	1	1			1	48	4	no work
"	49	Ireland	Ireland	m	4	4	1		5	48	4	shut down
"	22	Germany	Germany	m	1	1			1	48	4	"
"	23	"	"	m	3	3	2		3	52		
"	39	U. S.	Ireland	m	5	5	2		6	48	4	shut down
"	30	Poland	Poland	m	1	1			2	43	9	burnt foot
"	32	Germany	Germany	m	1	1			2	45	7	no work
"	35	Ireland	Ireland	m	1	1	1		2	44	4	shut down
"	26	Poland	Poland	m	1	1			1	48	4	"
"	27	Germany	Germany	m	1	1			1	50	2	no work
"	28	"	"	m	4	4	1		5	48	4	shut down
"	33	"	"	m	4	4	2		5	46	6	no work
"	24	"	"	m	2	2			3	48	4	shut down
"	29	U. S.	U. S.	m	2	2			3	48	4	"
"	25	England	England	m	1	1		1	3	48	4	"
"	27	"	"	m	1	1			2	48	4	"
"	30	U. S.	U. S.	m	4	4	1		5	39	13	no work
"	29	"	Ireland	m	2	2			3	48	4	shut down
"	31	Canada	Canada	m	1	1			1	48	4	"
"	29	Germany	Germany	m	3	3			4	48	4	"
"	25	U. S.	"	m	1	1			1	48	4	"
"	25	"	U. S.	m	1	1			1	48	4	"
"	32	"	France	m	2	1	1		3	48	4	"
"	23	"	Germany	m	1	1			1	39	13	sickness
"	30	Canada	Canada	m	2	2			3	48	4	shut down
"	23	Germany	Germany	m	1	1			2	39	13	no work
"	28	"	"	m	1	1			2	48	4	shut down
"	39	"	"	m	5	5	2		6	48	4	no work
"	33	Poland	Poland	m	2	2			3	48	4	shut down
"	23	Canada	Ireland	m	1	1			2	42	10	sick and shut down
"	34	Ireland	"	m	9	9	4		10	48	4	shut down
"	30	Germany	Germany	m	2	2			3	48	4	"
"	27	"	"	m	2	2			3	48	4	"
"	27	Ireland	Ireland	m	1	1			2	48	4	"
"	37	U. S.	"	m	4	4	3		5	48	4	"
"	32	"	Germany	m	3	3			4	48	4	"
"	25	Poland	Poland	m	1	1			2	48	4	"
"	31	Holland	Holland	m	4	4			5	48	4	"
"	30	U. S.	"	m	1	1			1	48	4	"
"	38	Canada	Germany	m	7	7	3		8	48	4	"

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
413 50	\$432 00		\$432 00	\$430					\$6 00					20		\$250
15 00	720 00		720 00	720					free					7		
15 00	720 00		720 00	700	\$1,000									16		1,500
15 00	660 00	\$84	744 00	400	744 00	\$1,700	\$300							16		1,800
15 00	720 00		720 00	650	1,900	800								9		1,200
15 00	720 00		720 00	375	1,800	600								8		1,100
15 00	720 00		720 00	575	1,300	300					\$2,000	2	10 00	19		1,300
12 00	576 00		576 00	576	576			\$200	8 50							400
12 00	884 00		884 00	884	884				10 00		2,000	1	5 00			700
12 00	576 00		576 00	570					4 00			1	5 00	10		400
10 00	480 00		480 00	450	500	200					500	2	10 00	9		500
12 00	576 00		576 00	476				100	6 00					23		200
12 00	576 00		576 00	570					6 00					11		200
22 00	1,012 00		1,012 00	800				200	8 00			1	5 00			500
15 00	600 00	460	1,150 00	500	5,000	2,600	480							22		4,400
12 00	576 00		576 00	460				100	3 50		300	1	3 00	9	\$50	400
14 00	1,152 00	50	1,202 00	1,000	3,500			150			4,000	1	5 00	30		8,500
13 50	648 00		648 00	575				50	4 00			1	5 00	8		300
13 50	702 00		702 00	575				100	3 50		500			8		300
15 00	720 00		720 00	500	2,000	700	200				1,000	1	5 00			1,800
12 00	516 00		516 00	350	800	300	100	50				1	3 00	6	200	600
15 00	675 00		675 00	550				100	5 00		300			9		500
15 00	720 00		720 00	650	2,000		22				2,000	1	5 00	20		3,000
12 00	576 00		576 00	450					7 50		600	1	6 00	6		350
12 00	600 00	486	1,086 00	986	1,200	700	150					1	3 00	7		1,000
18 00	624 00		624 00	600					9 00		80	1	5 00	9	2	
12 00	552 00	60	612 00	500	1,200	800					2,000			9		500
22 00	1,056 00		1,056 00	925				100	8 00			1	7 50	12		1,000
13 50	648 00		648 00	540					5 00							400
19 00	912 00		912 00	575	1,400	475	300					2	12 50	15		1,400
18 00	864 00		864 00	814				50	9 00			1	5 00	15		600
12 00	468 00		468 00	450	1,500	300										1,900
15 00	720 00		720 00	645				75	free		2,000	1	5 00			4,500
18 00	864 00		864 00	864					10 00		2,000	1	5 00	7		700
10 00	420 00		420 00	440	500	275						1	5 00	16		525
15 00	720 00		720 00	420	1,000		300				2,000	1	7 50			2,000
18 00	864 00		864 00	864					5 50			1	7 50			600
15 00	720 00		720 00	306				400	12 00		2,000	2	12 50			900
18 00	702 00		702 00	302				400	7 00			1	5 00			600
31 06	1,008 00		1,008 00	800	3,000			200			2,000	1	7 50	20		5,000
16 00	624 00		624 00	624					5 00					8		800
15 00	720 00		720 00	500				200	8 50		250			21		600
12 00	576 00		576 00	540	1,200	500						1	4 00	18		1,100
12 00	576 00		576 00	435	1,000		100				50	1	4 00	9	2	800
13 00	546 00		546 00	500					7 00		1,000	1	5 00	1	80	150
12 00	576 00		576 00	500	500	150	50				2,000			33		700
10 00	480 00		480 00	330				150			800	1	5 00	8		1,000
16 00	768 00		778 00	560				200	4 50			1	7 50	10		1,200
15 00	720 00		720 00	600				100	7 50		2,000	1	5 00	6	25	500
15 00	720 00		720 00	720					7 50		2,300	2	12 50			700
14 00	672 00		672 00	670					6 50							500
12 00	576 00		576 00	350				200	3 25		4 00	1	5 00	6		500
16 00	480 00		480 00	450					6 00			1	5 00	6		250
18 00	864 00		864 00	630				150	7 00		2,000	2	12 00			1,000
18 00	864 00	440	1,304 00	750	2,500	600	400				2,000	1	5 00	20		3,500

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Causes for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	24	Germany	Germany	m	—	—	—	—	1	44	8	no work
"	23	U. S.	Ireland	m	—	—	—	—	1	42	10	burnt and no work
Foreman	28	England	England	m	2	2	—	—	2	48	4	shut down
Molder	27	Germany	Germany	m	2	2	—	—	2	44	8	sick and shut down
"	26	"	"	m	2	—	—	—	1	35	17	"
"	28	Ireland	Ireland	m	1	1	—	—	2	48	4	shut down
"	31	U. S.	Germany	m	1	1	—	—	2	48	4	"
"	32	Germany	"	m	1	1	—	—	1	48	4	"
"	33	U. S.	U. S.	m	2	2	—	1	4	48	4	"
"	34	Canada	Ireland	m	3	3	—	—	4	48	4	"
"	29	"	Canada	m	1	1	—	—	2	48	4	"
"	45	Ireland	Ireland	m	1	1	1	—	2	45	7	sick
"	32	U. S.	Germany	m	2	2	—	—	3	48	4	shut down
"	29	Ireland	Ireland	m	1	1	—	—	2	48	4	"
"	29	Germany	Germany	m	—	—	—	—	1	48	4	"
"	24	U. S.	Poland	m	1	1	—	1	3	48	4	"
"	32	"	Germany	m	2	2	2	—	4	44	8	sick and shut down
"	28	Canada	Canada	m	1	1	—	—	2	48	4	shut down
"	31	U. S.	Germany	m	2	2	2	—	3	44	8	burnt foot
"	28	Germany	"	m	3	3	—	—	4	44	8	no work
"	31	"	"	m	—	—	—	—	1	44	8	sick and shut down
"	27	Ireland	Ireland	m	—	—	—	1	2	39	12	no work
"	30	"	"	m	1	1	—	—	2	48	4	shut down
"	28	Canada	Canada	m	1	1	—	—	1	48	4	"
"	34	Germany	Germany	m	2	2	1	1	4	48	4	"
"	29	"	"	m	1	1	—	—	2	48	4	"
"	42	"	"	m	2	2	—	1	4	48	6	no work
"	44	U. S.	Ireland	m	1	1	—	—	2	44	8	Laid off voluntarily
"	39	Ireland	"	m	2	2	2	—	3	45	7	sick and shut down
"	28	"	"	m	1	1	—	—	2	48	4	shut down
"	49	England	England	m	3	3	1	—	4	48	4	"
"	24	Germany	Germany	m	—	—	—	1	2	46	6	sickness and shut down
"	25	"	"	m	2	2	—	—	2	46	6	sick
"	24	Poland	Poland	m	1	1	—	2	4	48	4	shut down
"	26	U. S.	Germany	m	1	1	—	—	2	48	4	"
"	38	Germany	"	m	1	1	—	—	2	35	17	sick and no work
"	29	Poland	Poland	m	4	4	—	—	5	38	14	sick
"	23	"	"	m	1	1	—	—	1	48	4	shut down
"	28	Germany	Germany	m	4	4	—	—	5	44	8	no work
Laborer	40	Ireland	Ireland	m	4	4	3	—	5	32	—	"
Molder	50	"	"	m	7	4	1	—	5	48	4	shut down
"	22	Germany	Germany	m	—	—	—	—	1	48	4	"
"	34	U. S.	"	m	6	6	2	—	7	48	4	"
"	23	Germany	"	m	—	—	—	—	1	39	13	no work
"	24	"	"	m	—	—	—	—	1	32	20	"
"	26	Poland	Poland	m	1	1	—	—	2	44	8	"
"	23	Austria	Austria	m	1	1	—	—	2	48	4	shut down
"	30	France	France	m	3	3	—	1	5	44	3	no work
"	23	Germany	Germany	m	3	3	—	—	4	48	4	shut down
"	26	"	"	m	3	3	—	1	5	46	6	no work
"	33	"	"	m	1	1	1	—	2	48	4	shut down
"	22	"	"	m	—	—	—	—	1	48	4	"
"	30	U. S.	U. S.	m	4	4	—	—	5	44	8	sick and shut down
"	22	"	"	m	1	1	—	—	2	44	8	no work
"	30	"	Switz.	m	1	1	1	—	2	49	3	"

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$528 00		\$528 00	\$480				\$50	\$3 50		\$300			7		\$400
18 00	756 00		756 00	700				700	8 00		2000	3	\$18 50			300
15 00	720 00		720 00	425	\$1600	\$600	\$150	100						8	\$25	1200
12 00	528 00		528 00	400	1000	300						1	5 00	9		850
12 00	420 00		420 00	400					8 00			1	5 00	10		100
16 00	768 00		768 00	600					10 00					9		900
20 00	960 00		960 00	750				200	7 50		185	1	7 50			600
18 50	648 00		648 00	588	1200		80	30				1	7 50	22		2000
20 00	960 00		960 00	425	5000		80	500								7000
15 00	720 00		720 00	500				200	10 00					13		600
21 00	1008 00		1008 00	950	1400	400					2000	2	10 00	25		2000
12 00	540 00		540 00	525					8 00		2000			48		500
18 50	648 00		648 00	450				175	5 00			1	5 00			350
12 00	576 00		576 00	550	1700	800								9	100	1700
13 20	638 60		638 60	500				120	5 00					6		480
15 00	720 00	\$36	756 00	525	1300	400		200			750					1100
22 50	990 00		990 00	775				200	9 00		2000	1	7 50			1600
21 00	1008 00	860	1368 00	750	2000			600			1000	2	12 50	18		6000
18 00	792 00		792 00	725				50	8 00		2000	1	7 00			600
10 50	462 00		462 00	450					5 00			1	5 00	16		500
15 00	660 00		660 00	635					8 00		2000			18		1000
12 00	468 00		468 00	398				100	8 00		2000	2	10 00	16		200
22 00	1056 00		1056 00	700				300	12 00		4000	2	10 00	9		800
18 00	864 00		864 00	850					11 00					6		300
12 00	576 00		576 00	425	1100		32	100				1	7 50	9		1500
10 50	504 00		504 00	300	1200	900	150					1	5 00	9	10	400
15 00	690 00		690 00	650	2000	500						1	7 50	19		1600
18 00	792 00		792 00	550	2500	1000	150				2000					1700
24 00	1080 00		1080 00	650	2500	600	400				2000	2	7 00	17	50	2800
14 00	672 00		672 00	672					8 00		2000	1	5 00	26		500
19 00	912 00	200	1112 00	1000				100	9 00			1	5 00	42		2000
18 00	828 00		828 00	828					9 00		250	2	12 50	9		200
9 00	414 00		414 00	400	1000							1	5 00	8		1200
10 50	504 00		504 00	360				150	3 00					9		600
18 50	648 00		648 00	348				300	7 50		2000	2	12 50			800
10 50	367 50		367 50	350					4 50			1	3 00	9		200
10 50	399 00		399 00	350	1000	450						3	12 00	9		650
10 50	504 00		504 00	500					2 00					4		50
8 00	352 00		352 00	325	1400	500					300			7	800	900
9 00	468 00	100	568 00	450	1700	900		50			9000	2	9 00	22		1000
15 00	720 00	800	1020 00	560				150	8 50		2000			10		500
7 50	360 00		360 00	295				125	free			1	4 00	7		200
21 00	1008 00		1008 00	750	2800	200	200				2000	2	10 00			3800
8 50	331 50		331 50	281				50	3 00			1	5 00	6		150
9 00	288 00		288 00	275					4 50					7	800	200
9 00	396 00		396 00	396					4 00		800			6		800
7 50	360 00		360 00	295				75	4 00					9		500
12 00	528 00		528 00	375	1800	700	150					1	5 00	17		1800
18 00	864 00		864 00	600				100				1	5 00	22		700
12 00	552 00		552 00	425	600	800	100					1	5 00	8		600
12 00	576 00		576 00	325	900	500	200					1	5 00	16		600
9 00	432 00		432 00	325				100	2 50					24		150
14 00	616 00		616 00	585	1200			40				1	7 50			1600
15 00	660 00		660 00	660					5 00							150
10 00	490 00		490 00	300	1000	550	150					1	6 50			800

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Molder	36	Germany	Germany	m	—	—	—	1	2	26	no work
"	27	U. S.	"	m	1	1	—	—	2	48	shut down
"	23	"	"	m	1	1	—	—	1	48	"
"	25	"	Canada	m	1	1	—	—	2	39	no work and sick
"	27	"	U. S.	m	1	1	—	—	2	48	shut down
"	35	Germany	Germany	m	2	2	—	—	3	48	"
"	35	"	"	m	5	5	1	1	7	22	sick
"	43	U. S.	Ireland	m	1	1	1	—	2	48	shut down
"	28	Canada	Canada	m	1	1	—	—	2	49	no work
"	39	Germany	Germany	m	1	1	1	1	3	48	shut down
"	23	U. S.	U. S.	m	—	—	—	—	1	26	laid off
"	24	"	Germany	m	2	2	—	—	3	43	sick
"	27	Ireland	Ireland	m	1	1	—	—	2	48	shut down
"	28	Canada	Canada	m	—	—	—	—	1	48	"
"	29	U. S.	U. S.	m	1	1	—	—	2	44	sick
"	27	"	Ireland	m	3	3	—	—	4	46	no work
"	27	"	France	m	—	—	—	—	1	48	shut down
"	65	England	England	m	2	—	—	—	1	48	"
"	29	Germany	Germany	m	2	2	—	—	3	48	"
"	36	Denmark	Denmark	m	4	4	1	—	5	48	"
"	29	Ireland	Ireland	w'r	1	1	—	—	1	36	sick and shut down
"	29	Poland	Poland	m	1	1	1	1	3	31	no work
"	29	Germany	Germany	m	2	2	—	1	4	48	shut down
"	24	"	"	m	1	1	—	—	2	48	"
"	46	"	"	m	1	1	—	—	2	48	"
"	24	"	"	m	—	—	—	—	1	48	shut down
Stove moulder	29	"	"	m	1	1	—	—	2	35	no work
"	59	"	"	m	4	—	—	—	1	48	shut down
"	27	U. S.	"	m	3	3	—	—	4	48	"
"	30	Germany	"	m	3	3	—	—	4	35	no work
Laborer	35	"	"	m	5	5	3	—	6	48	shut down
Stove moulder	23	U. S.	Ireland	m	2	2	—	—	3	48	"
Grinder	38	Germany	Germany	m	4	4	1	—	5	40	sick
"	25	"	"	m	1	1	—	—	2	48	shut down
Laborer	69	"	"	w'r	3	1	—	—	1	48	"
Stove moulder	30	"	"	m	3	3	—	—	4	48	"
Grinder	26	"	"	m	2	2	—	—	3	49	sick and no work
Stove moulder	22	"	"	m	1	1	—	—	2	46	shut down
"	26	Canada	Canada	m	3	3	—	—	4	41	no work
Elevator hand	26	U. S.	U. S.	m	1	1	—	—	2	48	"
Stove moulder	25	"	Belgium	m	2	2	—	—	3	52	"
"	35	"	France	m	4	4	1	—	5	48	shut down
Laborer	56	Germany	Germany	m	5	5	2	—	6	48	"
"	35	"	"	m	2	2	—	—	3	48	"
Stove moulder	41	U. S.	Ireland	m	2	2	2	—	3	48	"
"	30	"	Germany	m	3	3	2	—	4	39	no work
Grinder	30	Germany	"	m	2	2	—	—	3	48	shut down
"	38	"	"	m	7	7	4	—	8	52	"
Stove moulder	34	U. S.	Ireland	m	1	1	—	—	2	48	shut down
Laborer	29	Germany	Germany	m	—	—	—	—	1	48	"
"	37	"	"	m	—	—	—	—	1	52	"
"	26	"	"	m	2	2	—	—	3	48	shut down
"	40	"	"	m	5	4	1	—	5	48	"
Stove moulder	40	U. S.	Scotland	m	1	—	—	—	1	48	"
"	36	Germany	Germany	m	3	3	1	—	4	39	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
88 00	4208 00		\$208 00	\$240					\$7 00		\$110			22	\$80
11 00	528 00		528 00						8 50						250
14 00	672 00		672 00						5 50						80
13 50	526 50		526 50						10 00						175
18 00	864 00		864 00						8 00						350
15 00	720 00		720 00		\$1,100	\$800	\$100		8 00		2,000	2	12 00	8	700
16 00	552 00		552 00						10 00		2,000	1	5 00	32	450
18 00	864 00		864 00					200	10 00						1,000
13 50	661 50		661 50						10 00			1	5 00	8	500
13 00	624 00		624 00		1,000	350	50					1	5 00	17	1,000
13 00	838 00		838 00						\$7 00		2,000	2	10 00		200
12 00	516 00		516 00		1,050	950	75		10 00						800
15 00	720 00		720 00					140	9 00						200
18 00	864 00		864 00						7 00						500
13 00	572 00		572 00									1	7 50	10	150
13 50	621 00	\$240	861 00	850	3,000						2,000	1	5 00		3,500
12 00	576 00		576 00		1,800	1,000					2,000	2	10 00		1,300
15 00	720 00		720 00		2,000										2,500
13 00	720 00		720 00		650	825	50					2	12 50	42	1,000
18 00	864 00		864 00		1,500	40	200							14	3,000
12 00	432 00		432 00						3 00	4 00				9	1,000
7 50	232 50		232 50											9	400
10 50	504 00		504 00		1,000	400	140					2	8 00	9	800
9 00	432 00		432 00		1,200	1,100	100					1	5 00	6	600
7 50	360 00		360 00		1,500							1	5 00	9	1,800
10 50	504 00		504 00		425			70	4 00			1	5 00	10	200
7 50	282 50		282 50		262				7 00		500	5		7	100
9 00	432 00	350	782 00		4,700	2,000	500		8 00		2,000			11	5,000
12 00	576 00		576 00								2,000	1	5 00		400
6 00	210 00		210 00		1,000	600						1	7 50	17	800
8 25	396 00		396 00		1,000	200	100				1,000			15	1,000
30 00	1440 00	120	1,560 00		1,800			750			3,000	1	7 50		5,000
7 50	300 00	50	350 00						4 00					5	50
9 00	432 00		432 00						6 00					5	150
6 00	316 80		316 80						5 00					17	
10 50	504 00	144	648 00	648	1,500	450								9	3,000
8 50	416 50		416 50		950	300								7	1,200
9 00	414 00		414 00		250									19	500
12 00	482 00		482 00						6 00			1	4 00	10	500
8 25	396 00		396 00						6 00					10	400
15 00	780 00		780 00						5 00		2,000				250
15 00	720 00		720 00					200	8 00						500
7 50	360 00	200	560 00		750	300	75							7	750
6 00	288 00		288 00		400	250	50							6	300
15 00	720 00		720 00		2,500	300	200				2,500	3	15 00		3,500
12 00	468 00		468 00		555				8 00		2,000	1	5 00		200
12 00	576 00		576 00		1,000	100	100								1,600
8 00	416 00		416 00		1,000	400								20	700
12 00	576 00		576 00		1,000	400	50	100				1	5 00		1,200
8 00	384 00		384 00						3 00		200	1	4 00	3	300
8 00	416 00		416 00		1,400	400	100				200	1	5 00	10	1,200
8 00	384 00		384 00		1,000	500					200	1	5 00	6	700
12 00	576 00	300	876 00		1,000	100	250				800			10	1,200
18 00	864 00		864 00					200	8 00						1,100
9 50	370 50		370 50						5 00		20			8	100

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Metal polisher.....	34	Germany	Germany	m	3	3			4	48	4	shut down
".....	40	"	"	m	4	4	3		5	44	8	no work
Laborer.....	29	"	"	m	1	1		2	4	30	22	"
".....	34	"	"	m	1	1	1		2	44	8	"
Stove mounter.....	27	"	"	m	1	1			2	45	7	"
Metal polisher.....	45	"	"	m	5	5	3		6	45	7	"
".....	53	"	"	m	1	1			1	45	7	"
".....	31	Poland	Poland	m	2	2	1		3	52	7	"
Stove mounter.....	32	Germany	Germany	m	1	1			1	44	8	no work
Metal polisher.....	27	"	"	m	1	1			2	44	8	"
".....	25	"	"	m	1	1			1	44	8	"
".....	34	"	"	m	1	1			2	35	17	"
".....	24	U. S.	Ireland	m	1	1			1	35	17	"
".....	48	Germany	Germany	m	1	1			1	44	8	"
".....	39	"	"	m	2	2			3	45	7	"
".....	27	"	"	m	3	3			4	48	4	shut down
".....	26	"	"	m	3	3			4	44	8	no work
".....	40	"	"	m	3	3			4	46	6	"
".....	47	"	"	m	3	3	1		4	48	4	shut down
".....	38	"	"	m	1	1			2	39	13	no work
".....	25	"	"	m	1	1			1	47	5	"
".....	48	"	"	m	6	5	1		6	15	37	"
".....	28	"	"	m	1	1			2	44	8	"
".....	50	"	"	m	5	5			4	26	26	"
Grinder.....	27	"	"	m	2	2			3	48	4	shut down
Laborer.....	30	"	"	m	2	2			3	26	26	no work
".....	37	"	"	m	3	3			4	48	4	shut down
".....	33	"	"	m	1	1			1	48	4	"
Metal polisher.....	29	"	"	m	4	4	2		5	46	6	no work
Stove mounter.....	45	Ireland	Ireland	m	3	3	2		4	48	4	shut down
".....	32	Switz	Switz	m	4	4	2		5	44	8	no work
Metal polisher.....	32	U. S.	Germany	m	3	3	1	1	3	39	13	"
".....	33	Germany	"	m	4	4	2		5	39	13	"
".....	39	"	"	m	7	7	3		8	39	13	"
".....	30	"	"	m	1	1		1	3	48	4	shut down
".....	36	"	"	m	3	3			4	44	8	no work
".....	30	"	"	m	2	2	2		3	48	4	"
".....	29	Poland	Poland	m	1	1			1	48	4	shut down
".....	45	Germany	Germany	m	1	1			1	26	26	no work
".....	35	U. S.	U. S.	m	6	6	3		7	26	26	"
".....	29	Germany	Germany	m	2	2		1	4	46	6	"
Stove mounter.....	23	U. S.	U. S.	m	1	1			2	44	8	shut down
".....	29	"	Belgium	m	2	2			3	48	4	"
".....	38	Canada	Ireland	m	3	3	5		9	48	4	"
".....	24	U. S.	France	m	2	2			3	35	17	no work
Laborer.....	50	Ireland	Ireland	m	4	4			3	44	8	"
Pattern filer.....	39	Canada	"	m	7	7	4		3	52		"
Crater.....	43	Germany	Germany	m	1	1			1	48	4	not answered
Laborer.....	40	U. S.	France	m	3	3	1		4	48	4	shut down
Foreman.....	35	"	"	m	3	3	3		4	52		"
Stove mounter.....	30	Ireland	Ireland	m	3	3			4	48	4	shut down and sick
".....	34	Canada	"	m	1	1			2	48	4	shut down
Crater.....	36	Germany	Germany	m	3	3	1		4	48	4	"
Carpenter.....	27	Holland	Holland	m	1	1			2	31	21	no work
Crater.....	52	Germany	Germany	m	7	6	2		7	48	4	shut down

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
7 50	\$360 00		\$360 00	\$360					\$3 50					2		\$250
12 00	528 00		528 00	528	\$1,000				7 00			1	\$7 50	17	\$100	1,500
7 50	225 00		225 00	225							\$500			7		50
7 50	380 00		380 00	380	1,200	\$300					1,000			7	500	600
9 00	405 00		405 00	390				\$50	6 00		1,000	1	5 00	9	50	350
8 25	371 25		371 25	371	800	500								4		700
7 50	337 50		337 50	337					4 00		96			5		300
8 00	416 00		416 00	416					4 00					1	50	250
13 00	528 00		528 00	528	1,000	300		150			2,000	1	5 00	8		1,000
12 00	528 00		528 00	528					7 00		600	2	10 00	12		300
12 00	528 00		528 00	528					6 00			2	8 00	11		600
12 00	420 00		420 00	420	900	400								14	25	600
12 00	420 00		420 00	420					5 50							75
9 00	396 00		396 00	396	1,000									8	400	1,100
9 00	405 00	\$200	605 00	500	1,500		\$100							6	500	2,000
15 00	720 00		720 00	625	1,200			75				1	5 00	23		1,400
10 00	440 00		440 00	340				100	not an		1,000			6		400
18 00	828 00		828 00	575	1,600	950	200					1	5 00	17		1,000
8 25	386 00		386 00	386	1,000			20			700			18	5	1,200
12 00	468 00		468 00	468					8 00			2	12 50	20		400
8 50	399 50		399 50	250	1,000	600	100							8		600
7 50	112 50	450	562 50	450	1,500	700	50							18	100	1,000
12 00	528 00		528 00	528					5 00			2	10 00	4		300
7 50	195 00	100	295 00	295					6 00					3		200
9 00	432 00		432 00	370				50	4 50			1	5 00	17		125
7 00	182 00		182 00	182					3 00					1 1/2		100
7 50	360 00		360 00	360					3 00					5	15	125
7 50	360 00		360 00	360					3 00					2		250
19 00	828 00		828 00	440	1,500	950	300					3	15 50	16		2,200
21 00	1008 00	180	1,188 00	600	3,000			500			5,000	1	5 00	31		7,600
12 00	528 00		528 00	528					5 50					9	50	300
15 00	585 00		585 00	335				250	8 00		2,000	1	5 00	20		1,500
12 00	468 00		468 00	468	900									20		1,200
11 00	429 00	150	579 00	579	100									22		250
19 00	624 00		624 00	325	1,300	650	250					1	7 50	20		1,100
7 75	341 00	50	391 00	290	1,300	600	100				800			8		800
8 25	396 00		396 00	396					6 00		100	1	5 00	5		150
12 00	576 00		576 00	576					3 00					9		200
9 00	234 00		234 00	234					8 00		2,000	1	5 00	25	25	300
19 00	468 00		468 00	468					8 00							200
10 50	468 00		468 00	375	1,200	200	100					1	5 00	11		1,300
12 00	528 00		528 00	478				50	15 00							500
18 00	864 00		864 00	725				100	9 00		2,000	2	10 00			500
15 00	720 00	180	900 00	900					12 00		2,000			22		800
12 00	420 00		420 00	320				100	6 00							200
7 50	330 00	300	630 00	630					8 00					36		350
12 00	624 00	75	699 00	699					10 00			1	7 50	9	75	300
7 50	360 00		360 00	360	1,000	400								9	100	800
8 00	384 00		384 00	384					7 00		200					100
13 50	702 00		702 00	702	1,300						2,000	1	5 00			1,500
12 00	576 00		576 00	576					9 09		3,000	1	5 00	27		800
12 00	576 00		576 00	576					8 00		2,000	1	7 50	10		350
8 00	384 00		384 00	325	1,000	350	25					1	5 00	13		750
8 00	248 00		248 00	248					6 00					5		200
9 00	432 00	150	582 00	582	200							1	5 00	19		350

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Crater	44	Germany	Germany	m	2	2			2	35	17	no work
"	36	U. S.	"	m	2	2	1		3	39	13	"
Stove moulder	29	Germany	"	m	2	2			2	44	8	shut down
Crater	29	Canada	Ireland	m	2	2			2	48	4	"
Laborer	46	Germany	Germany	m	2	2	1		3	48	4	"
Stove moulder	27	Canada	Ireland	m	1	1			2	48	4	not ana.
"	27	U. S.	Germany	m	1	1	1		2	48	4	shut down
"	40	Germany	Germany	m	5	5	3		8	48	4	"
"	27	U. S.	Belgium	m	2	2	1		3	39	13	no work
Tinner	34	"	Germany	m	1	1	1		2	52		"
Stove moulder	46	Germany	"	m	3	3	2		4	48	4	shut down
"	48	"	"	m	1	1			1	52		"
Laborer	30	"	"	m	4	4			4	48	6	no work
Buffer	27	"	"	m	1	1			2	44	8	"
"	47	"	"	m	7	5	1		6	26	26	"
Stove moulder	20	U. S.	Ireland	s						48	4	not ana.
Metal polisher	29	Germany	Germany	s						39	13	no work
"	21	U. S.	"	s						29	23	"
Stove moulder	23	"	Ireland	s						30	22	laid off
"	23	"	U. S.	s						39	13	no work
"	25	Canada	Ireland	s						48	4	shut down
"	23	Ireland	"	s				2	2	44	8	"
"	24	Germany	Germany	s						39	13	no work
Crater	23	"	"	s						52		"
Stove moulder	18	U. S.	Ireland	s						48	4	shut down
Grinder	31	"	"	s						46	6	no work
Machine hand	20	Germany	Germany	s						48	4	shut down
Stove moulder	48	Ireland	Ireland	s			1	1	1	50	2	no work
Laborer	25	Germany	Germany	s						35	17	"
Crater	28	U. S.	U. S.	s						52		"
"	25	Germany	Germany	s				5	5	45	7	no work
Metal polisher	23	U. S.	"	s				9	9	39	13	"
Stove moulder	26	Germany	"	s				1	1	45	7	"
Metal polisher	26	U. S.	France	s						52		"
"	41	"	U. S.	s						44	8	no work
Stove moulder	20	Germany	Germany	s						48	4	shut down
"	22	Canada	Canada	s				2	2	48	4	"
Laborer	27	Germany	Germany	s				2	2	39	13	no work
"	23	U. S.	U. S.	s						44	8	"
"	20	"	"	s						48	4	shut down
Crater	21	Germany	Germany	s						48	4	"
"	22	U. S.	"	s						46	6	no work
Tinner	20	"	Ireland	s				2	2	48	4	shut down
"	19	"	U. S.	s						48	4	"
Laborer	18	Canada	Canada	s						18	34	no work
Buffer	14	U. S.	Germany	s						52		"
"	18	"	Canada	s						39	13	no work
Stove moulder	16	"	Germany	s						44	8	"
Laborer	17	Germany	"	s						44	8	"
"	16	"	"	s						39	13	"
"	16	"	"	s						46	6	not ana.
Tinsmith	19	U. S.	Ireland	s						52		"
Laborer	13	"	U. S.	s						52		"
"	16	"	Germany	s						48	4	shut down
"	14	Germany	"	s						52		"

EIGHTH ANNUAL REPORT.

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TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$1 50	\$262 50		\$262 50	\$262	\$800	\$200			\$3 00		\$3000	1	\$10 00	7		\$750
8 00	312 00	\$75		387 00	387									20		200
15 00	690 00		690 00	690 00	1500							1	5 00	18		2000
8 00	384 00		384 00	384 00	284			\$100	5 50					15		300
7 50	360 00		360 00	360 00	1000	325						1	8 00	17		1000
15 00	720 00		720 00	720 00					8 00		1250	1	12 50	12		500
9 90	475 20		475 20	475					9 00							250
15 00	720 00		720 00	720 00					10 50		2000	1	7 50	35		350
15 00	585 00		585 00	585					9 00		2000	2	10 00			900
12 00	624 00		624 00	624					10 00							350
10 50	504 00	200	704 00	435	2000	1000	\$150				4500	1	9 00	22	\$1	2000
10 50	546 00		546 00	275	1700		250					1	5 00	24		2500
9 00	414 00		414 00	335	1200	800	50				600			5		1200
9 50	418 00		418 00	375				80	5 00		1000			7		800
8 00	208 00	800	508 00	508					5 00			2	8 00	19		250
12 00	576 00		576 00						†							200
16 50	643 50		643 50					200	\$5 00					28		225
13 00	377 00		377 00						3 50							40
10 50	315 00		315 00						4 00							75
9 00	351 00		351 00						3 50							100
15 00	720 00		720 00						7 00			1	7 50	23		80
10 50	462 00		462 00					100	4 00					19		500
11 00	429 00		429 00						3 00					22		40
9 00	468 00		468 00						3 00					7		50
10 50	504 00		504 00					50	3 50							250
6 60	308 60	46	349 60						3 50							900
6 00	288 00		288 00						5 00					10		50
10 50	525 00	240	765 00	744	1500									35		1800
7 50	262 50		262 50					15	3 00		75	1	4 00	9		25
8 25	429 00		429 00					100	4 00							450
7 50	337 50		337 50	237				100	†					6		200
12 00	468 00		468 00	468					†							100
12 00	540 00		540 00	540					†					9		40
15 00	780 00		780 00						3 50							140
15 00	660 00	50	710 00					800	4 00							2500
12 00	576 00		576 00						3 50							100
10 50	504 00		504 00					25	4 00					10		100
7 50	292 50		292 50						3 00		150	1	5 00	8		75
7 50	330 00		330 00						4 00							50
7 50	360 00		360 00					25	6 00		800					100
7 50	360 00		360 00						3 00					2		25
8 00	368 00		368 00					100	3 00							250
15 00	720 00		720 00	720					†							175
6 00	288 00		288 00						†							50
6 00	108 00		108 00						†							
3 00	156 00		156 00						†							
5 25	204 75		204 75						†							
4 50	198 00		198 00						†							
5 25	231 00		231 00						†					7		
3 60	140 40		140 40						†					10		
5 25	241 50		241 50						†					4		
7 50	390 00		390 00						†							800
2 00	104 00		104 00						†							
4 50	216 00		216 00						†							
3 60	187 20		187 20						†					8		

* Gives wages to parents and lives at home.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	32	Germany	Germany	m	2	2			2	22	2	sick
"	33	Canada	U. S.	m	2	2			2	47	5	no work
"	43	Denmark	Denmark	m	1	2			2	26		first work in U. S.
"	37	Germany	Germany	m	1	1			1	46	6	no work
"	22	U. S.		m				1	1	44	8	
Foreman	38	Germany	"	m	4	4	4		5	48	4	shut down
Laborer	36	"	"	m	9	9	2		9	48	4	"
Metal polisher	32	"	"	m	3	3			4	48	4	"
"	30	U. S.	Canada	m	4	4	1	1	6	30	22	no work
"	28	"	Germany	m	2	2		1	4	43	9	"
Pattern maker	32	"	U. S.	m	2	2	1		3	48	4	sick
Carver	20	"	Germany	m					1	52		
Designer	44	Germany	"	m	4	4	8		15	53		
Foreman	37	U. S.	"	m	1				1	53		
Stove moulder	28	"	"	m	2	2			3	48	4	shut down
Laborer	43	Germany	"	m	6	5	3		6	48	4	"
Pattern maker	45	Canada	England	m	4	4	2		5	39	13	no work
"	42	Belgium	Belgium	m	2	2	1		3	52		
Laborer	65	Ireland	Ireland	m	5	5	1		6	48	4	shut down
Pattern maker	33	Germany	Germany	m	4	4	1		5	39	13	no work
"	30	Canada	Canada	m	2	2	2		3	45	7	"
"	35	"	wi	m						46	6	"
Laborer	38	Poland	Poland	m	6	6	8		7	48	4	shut down
"	35	Germany	Germany	m	3	3			4	42	10	no work
Pattern-maker	34	U. S.	"	m	1	1	1		2	49	3	"
"	40	Holland	Holland	m	5	5	4		6	35	17	finger cut & shut down
"	60	Ireland	Ireland	m	2	2	1	1	4	48	4	shut down
"	82	U. S.	U. S.	m	2	2			3	50	2	not answered
"	30	"	"	m	2	2	2		4	50	2	slack period
"	40	Germany	Germany	m	2	2			3	48	4	no work
Laborer	23	"	"	s				2	2	48	4	shut down
Metal polisher	23	"	"	s						44	8	no work
Laborer	25	U. S.	"	s						48	4	"
Stove moulder	23	"	U. S.	s						52		
Laborer	21	Ireland	Ireland	s						35		first work in U. S.
Tinner	23	U. S.	U. S.	s						48	4	shut down
"	22	"	Germany	s						50	2	no work
Copper maker	23	"	France	s						44	8	
Pattern maker	21	"	Ireland	s			2	2	2	49	3	shut down
Carver	24	"	Germany	s						52		
Laborer	14	Germany	"	s						52		
"	17	U. S.	Poland	s						48	4	shut down
"	16	"	Germany	s						52		
"	18	Poland	Poland	s						42	16	no work
Stove moulder	25	U. S.	Germany	s						44	8	laid off voluntarily
Laborer	18	Poland	Poland	s						48	4	shut down
"	19	"	"	s						48	4	"
Pattern maker	51	U. S.	Ireland	s			4	4	4	48	4	no work

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.	
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.				
\$3 25	\$181 50		\$256 50	\$350						\$3 00			1	\$3 00	3	\$25	\$800
9 50	423 00		423 00	275	\$1,100	\$1,000	\$75								29		300
7 50	195 00		195 00	195						5 00							200
7 50	345 00	120	465 00	442	1,800	350	23					\$2,000			36		2,000
7 50	330 00	60	390 00	290	1,400	600	100										1,600
18 00	864 00		864 00	740	1,200		100					2,000			25		1,500
9 00	432 00	400	832 00	800	1,200		18					86			8	120	1,500
10 00	480 00		480 00	425	1,000			\$50				1	5 00		7	15	1,500
9 00	270 00		270 00	270					8 00								200
13 00	774 00		774 00	700				60	8 00			150	2	12 50			250
31 00	1,008 00		1,008 00							\$9 00		3,000	1	5 00			350
16 50	858 00		858 00	650				200	4 00			150					700
40 00	2,060 00	250	2,310 00	1,100	5,500			1,000				3,000			42		13,000
22 50	1,170 00		1,170 00	675				450	11 00			2,500	1	5 00			2,500
15 00	720 00		720 00	720									1	5 00			500
8 25	396 00	100	496 00	425	1,500			50				2,000	1	5 00	25		2,000
12 00	468 00		468 00	468					7 00						30		200
19 00	998 00		998 00	788	3,000			200				3,000			40		3,500
7 50	360 00	300	660 00	660	1,000										38	50	1,300
18 00	702 00		702 00	702	900	200						1,000			8		1,300
18 00	810 00	180	990 00	990	4,000	750							1	5 00	25		4,000
18 82	865 72	180	1,045 72							3 50					9		4,000
7 50	360 00	100	460 00	500	700	100	50						1	3 00	15	10	800
7 50	315 00		315 00	290	900	400	25						1	4 00	20		700
30 00	960 00		960 00	670				300	12 00			1,000					1,000
18 00	630 00		630 00	550	1,800	800		50					1	5 00	18	90	1,500
15 00	720 00	300	1,020 00	1,020	1,080				16 00			2,000			29	50	1,000
18 00	900 00		900 00	550	2,500	2,000	200						1	4 00			1,000
19 20	995 00		995 00	995	1,900	1,000						2,000	2	10 00			1,000
18 00	864 00	400	1,264 00	700	1,200		500					2,000	2	10 00	14	800	1,800
7 50	360 00		360 00							5 00					5		50
15 00	660 00		660 00					25		4 00					18		75
9 00	432 00		432 00							3 25			1	4 00			50
12 00	624 00		624 00							6 00		2,000	1	6 00			75
4 80	231 00		231 00							3 50						20	30
12 00	576 00		576 00							3 50							35
12 00	600 00		600 00							5 00							20
12 00	528 00		528 00					100		5 00							250
10 50	514 50		514 50							6 00							150
21 00	1,092 00		1,092 00							4 50							250
3 30	171 60		171 60					*		*					10		
5 40	259 20		259 20					*		*							
3 30	171 60		171 60					*		*							
5 10	214 20		214 20					*		*							
12 00	528 00		528 00				50			4 50			1	5 00			200
5 10	244 80		244 80					25		2 50					3		75
6 00	238 00		238 00					25		3 00					5		
19 80	950 40		950 40					300		5 00		2,000					2,000

* Gives wages to parents and lives at home.

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 1.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
DETROIT STOVE WORKS.												
Molder	38	Canada	Canada	m	3	3			4	39	13	no work
"	29	Switz.	Switz.	m	1	1			1	43	4	"
"	35	Ireland	Ireland	m	3	3	2		4	43	9	sickness
"	29	U. S.	Germany	m	2	2	1		3	26	26	sick and no work
"	29	Germany	"	m	2	2			3	44	8	no work
"	36	Ireland	Ireland	m	3	3			4	41	8	"
"	25	Germany	Germany	m	2	2			3	48	4	shut down
"	28	"	"	m	2	2			3	48	4	no work
"	24	"	"	m	2	2			3	48	4	shut down
"	25	U. S.	"	m	2	2			3	44	8	no work
"	27	Germany	"	m	2	2			3	46	6	"
"	29	"	"	m	2	2			3	48	4	shut down
"	30	"	"	m	2	2			3	44	8	no work
"	38	"	"	m	4	4			5	39	13	"
"	26	"	"	m	3	3			4	42	10	"
"	35	"	"	m	3	3			4	42	10	"
"	22	"	"	m	1	1		1	2	39	13	"
"	35	U. S.	"	m	3	3	1		4	35	17	"
"	27	Germany	"	m	2	2			3	39	13	burnt and no work
"	29	"	"	m	2	2			3	48	4	no work
"	42	Ireland	Ireland	wr	1	1	1		1	48	4	"
"	33	U. S.	Germany	m	4	4	3		5	35	17	"
"	35	Germany	"	m	3	3	1		4	48	4	shut down
"	33	Ireland	Ireland	m					1	48	4	no work
"	33	U. S.	Germany	m					1	35	17	"
"	25	Denmark	Denmark	m	2	2			3	48	4	shut down
"	45	U. S.	Ireland	m					1	26	26	no work
"	28	Canada	Canada	m					1	39	13	"
"	38	Germany	Germany	m	1	1			2	48	4	"
"	24	Ireland	Ireland	m					1	48	4	shut down
"	37	"	"	m					1	48	4	no work
"	30	Germany	Germany	m	2	2	1		3	48	4	"
"	27	Ireland	Ireland	m					2	39	13	"
"	30	Germany	Germany	m					1	35	17	"
"	28	U. S.	U. S.	m	1	1	1		2	30	22	sickness & no work
"	26	Belgium	Belgium	m					1	44	8	no work
"	30	Germany	Germany	m	4	4			5	31	21	"
"	25	Belgium	Belgium	m	2	2			3	44	8	"
"	42	Germany	Germany	m	4	4	2		5	44	8	"
"	27	Canada	Canada	m	1	1		3	5	44	8	"
Foreman	43	U. S.	U. S.	m	2	1	1		2	52		
Laborer	44	Germany	Germany	m	2	2	1		3	49	3	no work
Molder	23	"	"	m					1	48	4	shut down
"	26	U. S.	"	m	2	2			3	35	17	no work
"	26	Belgium	Belgium	m					1	26	26	"
"	40	Canada	Canada	m	7	7	2		8	39	13	"
Laborer	43	Germany	Germany	m	5	5			6	39	13	"
Molder	51	Canada	U. S.	wr	6	4	2		4	39	13	"
"	29	U. S.	Germany	m	2	2	1		3	25	27	"
"	27	Germany	"	m	2	2			3	48	4	shut down
"	27	Canada	France	m	1	1			2	30	23	no work
"	30	Germany	Germany	m	2	2			3	44	8	"
"	33	"	"	m	4	4	1		5	42	10	"
"	37	U. S.	Canada	m					1	48	4	shut down
"	31	Germany	Germany	m	6	6	3	1	8	35	17	no work

TABLE No. 1.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and Board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$9 00	\$351 00		\$351 00	\$351					\$7 00		\$180			15	\$150
10 00	480 00		480 00	480					9 00			1	\$7 00	9	300
9 00	387 00		387 00	387	\$1,400	\$250					2,000			24	1,500
9 00	234 00		234 00	234	1,100	1,100									500
12 00	528 00		528 00	528	1,700	600	\$200							11	1,600
13 50	594 00		594 00	275	1,300			\$300			2,000			18	2,500
9 00	432 00		432 00	432					3 00					5	200
9 00	423 00		432 00	250	1,330		180							10	1,500
6 50	312 00		312 00	312					5 00			1	5 00	9	250
10 50	462 00		462 00	462					5 00						300
12 00	552 00		552 00	425	1,200	800	100							9	1,100
16 50	792 00		792 00	635	2,500	800	100							19	1,900
12 00	528 00		528 00	528	1,400	150								21	1,800
12 00	468 00		468 00	400	1,430	150	50							9	1,300
9 00	378 00		378 00	378	1,500	1,000								9	1,200
9 00	378 00		378 00	378	1,500									8½	2
6 00	234 00		234 00	234					5 00			1	5 00	12	150
10 00	350 00		350 00	275				50	7 50		2,000	1	5 00		300
9 00	351 00		351 00	400					9 00					18	300
10 50	504 00		504 00	504	2,000	600								16	1,600
12 00	576 00		576 00	576					6 00		3,000	2	10 00	23	200
9 00	315 00		315 00	315					7 00						100
10 50	504 00		504 00	335	1,400	800	50	50				1	5 00	7	900
12 00	576 00		576 00	525				50	9 00					10	500
12 00	420 00		420 00	420					8 00					250	100
9 00	432 00		432 00	325				100	6 00			1	5 00	7	300
18 00	468 00		468 00	468					10 00		3,000				500
8 00	312 00		312 00	312					7 00					23	100
8 00	384 00		384 00	384					3 00		400	1	5 00	14	400
10 50	504 00		504 00	425				50	10 00		2,000	1	5 00	7	450
9 00	432 00		432 00	432					9 00		2,000	1	5 00	10	350
10 50	504 00		504 00	504					7 00					24	100
9 00	351 00		351 00	351					8 00					14	125
8 00	280 00		280 00	280					8 00					18	200
6 00	180 00		180 00	210					4 50						60
7 50	330 00		330 00	330					8 00					18	200
6 00	198 00		198 00	230					5 00		100	1	5 00	18	250
10 00	440 00		440 00	440	1,300	500								9	1,000
10 50	462 00	\$200	662 00	662	1,300	600						2	10 00	17	700
10 50	462 00		462 00	462					9 00					24	300
25 00	1,300 00		1,300 00	1,300					10 00		5,000				400
9 00	441 00		441 00	325	1,000	200	100					1	5 00	19	1,000
8 00	384 00		384 00	384					free					11	100
9 00	315 00		315 00	315					5 00						100
9 62	250 00		250 00	250					6 00					11	125
9 00	351 00	150	501 00	501					10 00			3	15 00	18	300
9 00	351 00		351 00	351		350								16	800
12 00	468 00	200	668 00	668					11 50		2,000			24	500
14 80	385 00		385 00	385	100										240
12 00	576 00		576 00	576					7 00					9	300
12 00	360 00		360 00	360					7 00			1	10 00	10	700
12 00	528 00		528 00	528	1,100							1	5 00	20	1,300
9 00	378 00		378 00	378	900	500								10	650
9 00	432 00		432 00	382				50	7 00						350
7 50	262 50		262 50	213	600	300	20							17	450

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	36	Germany	Germany	m	4	4	2		5	39	13	no work
"	31	"	"	m	1	1			2	39	13	"
"	31	"	"	m	3	3			4	30	22	"
"	40	Belgium	Belgium	m	5	5	2		6	48	4	"
"	25	Germany	Germany	m	1	1			2	39	13	"
"	34	U. S.	Switz.	m	1	1			2	39	13	"
"	28	Belgium	Belgium	m	3	3			3	36	16	"
"	27	Germany	Germany	m	3	3			3	47	5	"
"	35	"	"	w	2	2	1	1	5	47	5	"
"	33	"	"	m	1	1			2	39	13	"
"	34	"	"	m	3	3	1	1	5	46	6	"
"	30	"	"	m	3	3			3	44	8	sick and no work
Stove moulder	30	U. S.	Ireland	m	3	3	2		3	37	15	no work
"	45	Germany	Germany	m	6	5	2		6	43	10	sick and no work
"	22	U. S.	"	m					1	30	22	no work
"	24	"	Ireland	m	1	1			2	35	17	"
"	28	Germany	Germany	m	3	3			4	39	13	"
"	27	U. S.	Ireland	m	4	4	1		5	44	8	"
Laborer	30	Germany	Germany	m	3	2			3	44	8	"
"	44	"	"	m	6	5	3		6	44	8	"
Stove moulder	32	"	"	m				1	2	39	13	"
Molder	34	"	"	m	3	3			4	44	8	"
"	26	Poland	Poland	m	1	1			2	48	4	shut down
"	33	"	"	m	4	4	1		5	48	4	"
"	34	Germany	Germany	m	4	4	1		5	35	17	no work
"	20	U. S.	Ireland	s						39	13	"
"	25	Germany	Germany	s						12	40	sickness
"	27	U. S.	"	s						44	8	no work
"	30	Canada	France	s			1	1	1	35	17	"
"	34	U. S.	Ireland	s						35	17	"
"	23	Germany	Germany	s			2	2	4	44	8	"
"	25	"	"	s						39	13	"
"	32	"	"	s						51	1	"
"	23	U. S.	"	s						44	8	"
"	24	"	"	s						46	6	"
"	27	"	Ireland	s			1	1	1	39	13	"
"	18	Germany	Germany	s						23	23	first work in U. S.
"	22	Canada	England	s						30	22	no work
"	24	U. S.	Ireland	s						22	30	"
"	28	Denmark	Denmark	s						48	4	shut down
"	22	Germany	Germany	s						39	13	no work
"	22	"	"	s						32	20	"
"	22	"	"	s						35	17	"
Stove moulder	21	U. S.	Ireland	s						35	17	"
"	20	"	Germany	s						48	4	"
"	21	"	Ireland	s						39	13	"
Molder	21	Poland	Poland	s						48	4	shut down
"	24	Germany	Germany	s						46	6	no work
"	22	U. S.	"	s						48	4	shut down
"	27	"	"	s						44	8	no work
"	22	Germany	"	s						30	22	vacation
"	26	U. S.	Ireland	s						35	17	no work
"	21	Germany	Germany	s			2	2	50	2	2	"
Stove moulder	26	U. S.	"	s						44	8	"
"	23	Belgium	Belgium	s			6	6	48	4	4	shut down

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$351 00	\$12	\$363 00	\$363					\$4 00					9	\$75	\$800
10 00	390 00		390 00	390	\$700							1	\$4 00	17		800
12 00	360 00		360 00	360	1,000	\$200								9	50	900
10 00	490 00		490 00	490	2,000						\$600	1	15 00	18	1,000	2,500
9 00	351 00		351 00	351					4 50			1	7 00	19		200
9 00	351 00		351 00	351					8 00		500					550
9 00	324 00		324 00	249	1,100	1,000	\$75							10		1,300
9 00	423 00		423 00	423	1,000	500								22		700
12 00	564 00		564 00	564	1,150	200					250	1	5 00	14	1	1,400
12 00	468 00		468 00	468					5 00		80			15		200
12 00	552 00		552 00	552					8 00			1	5 00	11		800
12 00	528 00		528 00	528	800	200						1	5 00	17		900
12 00	444 00		444 00	444					12 00			1	5 00			900
10 50	441 00	800	741 00	741					10 00		2,000	1	5 00	41		400
12 00	360 00		360 00	360					6 00							100
12 00	420 00		420 00	420					6 00							800
9 00	351 00		351 00	351					5 00			1	5 00	10		100
12 00	528 00		528 00	350	1,800	900	\$100				2,000					1,400
7 50	330 00		330 00	330					4 50					6		1,300
9 00	396 00	100	496 00	370	1,200	300	100				2,000	1	5 00	20	25	1,300
9 00	351 00		351 00	351	1,000	650					1,000			18		600
7 00	308 00		308 00	308					4 50					8		150
11 00	528 00		528 00	528					3 50		400			9		450
6 00	298 00		298 00	275	800	200								11		700
8 50	297 50		297 50	295	800	100	50					1	4 00	8		450
9 00	351 00		351 00							\$3 50						50
9 00	108 00		108 00							3 50				2½	50	60
15 00	660 00		660 00						4 00							100
10 00	350 00		350 00	350					8 00			1	10 00	8		100
12 00	420 00		420 00							3 50						
6 00	264 00		264 00					50		3 00		1	5 00	6		100
5 25	321 75		321 75							3 50		1	5 00	7		100
12 00	612 00		612 00							3 50				11	20	50
9 00	396 00		396 00							4 00						75
10 00	490 00		490 00							4 00		1	5 00			100
9 00	351 00		351 00							7 00		1	5 00			50
4 00	88 00		88 00							3 00						
6 00	180 00		180 00							3 50				5		40
7 50	165 00		165 00							4 00						15
8 00	364 00		364 00					100		3 50				18		900
12 00	468 00		468 00							3 50		1	5 00	16		50
1 50	144 00		144 00							3 50				6		25
9 00	315 00		315 00							4 00		1	5 00	21		50
9 00	315 00		315 00							3 00						100
7 50	360 00		360 00							3 50						150
9 60	374 40		374 40							3 50						150
4 50	216 00		216 00							3 00				3		50
12 00	552 00		552 00							4 00				16		25
7 50	360 00		360 00							4 50	200					25
9 00	396 00		396 00							4 00						50
7 25	217 50		217 50							3 50				11		80
9 00	315 00		315 00							3 50						25
5 00	250 00		250 00							3 00				6		15
15 00	660 00		660 00				100			5 00						300
12 00	576 00		576 00	576	1,400									9		1,300

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Stove mounter	19	U. S.	England	s	—	—	—	—	—	39	13	no work
Stove fitter	24	Germany	Ireland	s	—	—	—	—	—	26	26	" "
Stove mounter	21	Germany	Germany	s	—	—	—	—	—	39	13	" "
Metal polisher	23	"	"	s	—	—	—	—	—	39	13	" "
Metal polisher	21	U. S.	"	s	—	—	—	—	—	39	13	" "
Laborer	30	Germany	"	s	—	—	—	—	—	49	8	" "
Metal Polisher	25	U. S.	"	s	—	—	—	—	—	48	4	" "
Stove mounter	18	Canada	England	s	—	—	9	9	9	30	23	" "
"	21	Germany	Germany	s	—	—	—	—	—	26	26	" "
"	19	U. S.	"	s	—	—	—	—	—	48	4	shut down
Molder	32	Germany	"	m	1	1	—	—	2	26	26	sickness
"	33	"	"	m	8	8	1	—	4	39	13	no work
"	25	"	"	m	1	1	—	1	3	48	4	shut down
"	26	"	"	m	—	—	—	—	1	35	17	no work
"	23	"	"	m	—	—	—	—	1	35	17	" "
"	27	"	"	m	—	—	—	—	1	44	8	" "
"	25	"	"	m	—	—	—	—	1	25	17	" "
"	24	"	"	m	—	—	—	—	1	26	26	" "
"	29	"	"	m	3	3	—	—	4	44	8	" "
"	25	"	"	m	—	—	—	—	1	39	13	" "
"	35	"	"	m	3	3	1	—	4	46	6	" "
"	27	"	"	m	2	2	—	1	4	42	10	" "
"	23	"	"	m	1	1	—	—	2	39	13	" "
"	42	Ireland	Ireland	m	6	5	—	—	6	44	8	" "
"	27	Germany	Germany	m	—	—	—	—	1	52	—	—
Laborer	32	"	"	m	3	3	—	—	4	52	—	—
Stove mounter	45	Holland	Holland	m	6	6	2	—	7	46	6	no work
"	32	U. S.	U. S.	m	1	1	—	—	2	51	1	" "
"	28	"	Germany	m	—	—	—	—	1	45	7	" "
"	21	Holland	Holland	m	1	1	—	—	2	48	4	shut down
"	29	U. S.	Germany	m	3	3	—	—	4	48	4	" "
"	40	Germany	"	m	3	2	1	—	3	42	10	no work
Laborer	56	"	"	m	3	3	1	—	4	43	9	" "
Grinder	55	"	"	m	2	1	1	—	2	48	4	" "
Stove mounter	29	U. S.	"	m	2	2	—	—	3	52	—	—
"	28	"	U. S.	m	1	1	—	—	2	44	8	no work
"	48	Germany	Germany	m	5	5	4	—	6	46	6	" "
Laborer	33	"	"	m	4	4	2	—	5	41	8	" "
Stove mounter	35	"	"	m	3	3	—	—	4	42	10	" "
Pattern fitter	27	U. S.	U. S.	m	—	—	—	—	1	49	3	" "
Painter	29	"	Canada	m	1	1	—	—	2	52	—	—
Tinner	33	Canada	"	m	6	6	4	—	7	44	8	no work
"	32	Austria	Austria	m	3	3	1	—	4	52	—	—
"	32	U. S.	Germany	m	4	4	3	—	5	50	2	no work
Crater	28	"	U. S.	m	1	1	—	—	2	48	4	" "
Packer	32	"	"	m	6	6	—	—	7	52	—	—
Stove mounter	32	Holland	Holland	m	2	2	—	—	3	44	8	no work
Carver	36	U. S.	Germany	m	1	1	—	—	2	52	—	—
Pattern maker	30	"	"	m	1	1	—	—	2	46	6	no work
Carver	37	"	Ireland	m	6	6	3	—	7	44	8	sickness
Molder	17	Canada	Canada	s	—	—	—	—	—	49	3	burnt
"	18	Germany	Germany	s	—	—	—	—	—	26	26	no work
"	18	"	"	s	—	—	—	—	—	48	4	shut down
"	18	U. S.	Poland	s	—	—	—	—	—	46	6	burnt and shut down
"	19	Germany	Germany	s	—	—	—	—	—	48	4	shut down

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$232 50		\$232 00							\$3 00						\$25
15 00	390 00		390 00							3 50						200
12 00	468 00		468 00					\$150		3 50				21		250
10 00	390 00		390 00					15		3 50				21		200
9 00	351 00		351 00					22		4 00	\$500					75
7 50	367 50		367 50					50		3 50				10		200
12 00	364 00		364 00							4 00						300
12 00	300 00	\$96	396 00	\$396	\$1,800									8		1,900
7 50	195 00		195 00							3 50				8		40
6 00	288 00		288 00							4 00						25
7 50	195 00		195 00	243					\$5 00		250			13		200
10 50	409 50		409 50	409	1,200	\$900						1	\$4 00	14		1,200
12 00	576 00		576 00	576	1,000							1	10 00	8 1/2		1,500
11 00	385 00		385 00	380				20	6 00		350			1 1/2	\$80	400
7 50	262 50		262 50	262					3 50					18		60
12 00	562 00		562 00	465	900	200	\$50							9		1,000
5 00	175 00		175 00	175					3 00					9		50
4 50	117 00		117 00	117					5 00					7		50
10 00	440 00		440 00	440					6 00					10		300
8 00	312 00		312 00	312					4 00			1	4 00	9		400
7 50	345 00	50	395 00	345	600	300	50				600			9		700
15 00	630 00		630 00	630					3 50					16		200
15 00	595 00		595 00	595					3 00			1	5 00	9		200
9 50	418 00	350	768 00	768	1,200							1	5 00	20		1,400
7 50	390 00		390 00	390					3 50					5		200
7 50	390 00		390 00	390					4 00					1		50
10 50	455 00	150	605 00	605					7 00		150	1	3 00	20		300
12 00	612 00		612 00	612					5 50		2,000	1	5 00			400
15 00	675 00	20	695 00	626				150	Free		2,000	1	5 00			1,400
9 00	432 00		432 00	432					3 00		2,000			19 1/2		100
11 00	528 00		528 00	528					8 00							400
10 00	420 00		420 00	420	2,500							2	5 00	16		2,800
7 50	322 50	300	622 50	500	1,000	300	100							10		1,000
8 25	396 00		396 00	396					6 00		300			10		400
15 00	780 00		780 00	780					10 00		2,000	1	5 00	10		400
12 00	528 00		528 00	528					7 50		400			22		250
12 00	532 00	180	712 00	732	1,500									7	200	2,500
8 25	393 00		393 00	393					6 00					20	50	300
16 00	672 00		672 00	672	1,800	300	100				2,000	1	5 00			1,300
12 50	661 50		661 50	661					9 00		75	1	5 00			300
15 00	780 00		780 00	780				200	8 00		2,000	1	5 00			400
12 00	528 00	25	553 00	553					7 00		2,000			11		500
18 50	702 00		702 00	702					10 00		1,000	1	5 00	17		500
12 00	600 00		600 00	600					8 00		2,000	1	5 00			500
8 25	396 00		396 00	396					5 00							125
20 00	1040 00		1,040 00	790	1,600			250								2,500
18 00	792 00		792 00	292				500	12 00					8		900
22 50	1170 00		1,170 00	680	2,500	1,250	400				2,000	1	5 00			1,750
19 50	997 00		997 00	512	2,500	500	350									2,300
16 50	726 00		726 00	726	2,000	500										1,600
6 00	294 00		294 00					*		*				11		
8 50	91 00		91 00					*		*				8		
7 00	336 00		336 00					*		*				9		
8 00	368 00		368 00					*		*						
4 00	192 00		192 00					*		*						

* Gives wages to parents and lives at home.

TABLE No. 1—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	18	U. S.	Germany	s						49	3	shut down
"	16	"	Canada	s						49	3	no work
"	18	Poland	Poland	s						48	4	
"	20	Germany	Germany	s						48	4	shut down
"	16	"	"	s						47	5	no work
Laborer	16	"	"	s						48	4	shut down
Molder	19	Poland	Poland	s						38	14	no work
Stove mounter	18	U. S.	Germany	s						26	26	" "
Laborer	17	"	Poland	s						44	8	" "
Stove mounter	18	"	Germany	s						44	8	" "
"	15	"	"	s						26	26	" "
Molder	15	Germany	"	s						48	4	shut down
"	16	"	"	s						52		
"	15	"	"	s						48	4	shut down
"	16	U. S.	"	s						48	4	
"	19	"	Switz.	s						26	26	no work
"	18	"	U. S.	s						35	17	
"	17	"	Germany	s						48	4	shut down
Laborer	16	Germany	"	s						42	10	no work
"	14	U. S.	Poland	s						52		
Stove mounter	17	Germany	Germany	s						44	8	sickness
"	17	U. S.	Canada	s						44	8	no work
"	18	"	Ireland	s						47	5	" "
"	15	"	Germany	s						44	8	" "
Grinder	19	"	U. S.	s						39	13	" "
Laborer	15	Holland	Holland	s						52		
Stove mounter	18	Germany	Germany	s						39	13	no work
"	17	"	"	s						44	8	" "
Grinder	18	U. S.	U. S.	s						48	4	" "
Buffer	15	Canada	Canada	s						39	13	" "
Driller	16	U. S.	Germany	s						52		
Laborer	16	"	"	s						35	17	no work
"	15	"	Poland	s						44	8	sickness
Pattern maker	17	"	Ireland	s						50	2	no work
Tinner	19	"	"	s						52		
Foreman	44	"	"	m	7	7	3		8	52		
"	43	"	U. S.	m	2	2	1		3	52		
Stove mounter	22	"	Canada	m					1	35	17	no work
Laborer	36	Germany	Germany	m	3	3	2		4	44	8	" "
"	43	Ireland	Ireland	m	4	4			5	51	1	" "
Pattern maker	44	U. S.	U. S.	m					1	52		
"	30	Canada	Canada	m	3	3			4	52		
"	29	U. S.	Germany	m					1	48	4	no work
"	39	England	England	m	5	5	4		6	51	1	" "
"	32	Canada	Canada	w						44	8	" "
Pattern fitter	25	U. S.	Germany	m					1	52		
Metal polisher	34	England	England	m	1	1	1		2	39	13	no work
Nickle plater	22	Canada	Canada	m					1	48	4	" "
Buffer	42	Germany	Germany	m	5	5	2		6	34	18	" "
"	50	"	"	m	1	1			2	39	13	" "
"	39	"	"	m	3	3	2		4	26	26	sickness
"	35	"	"	m	3	3	2		4	39	13	no work
Stove mounter	27	Holland	Holland	m	1	1			2	44	8	" "
Pattern fitter	50	Germany	Germany	m					1	47	5	sickness
Pattern maker	64	U. S.	U. S.	m	2				1	39	13	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$4 50	\$220 50		\$220 50					*		*						
3 00	147 00		147 00					*		*						
3 50	168 00		168 00					*		*						
3 00	144 00		144 00					*		*						
3 50	117 50		117 50					*		*						
3 30	158 40		158 40					*		*						
3 00	228 00		228 00					*		*						
7 00	182 00		182 00					*		*	\$100					
4 50	198 00		198 00					*		*						
6 00	264 00		264 00					*		*						
3 30	85 80		85 80					*		*						
3 00	144 00		144 00					*		*						
3 50	182 00		182 00					*		*						
3 00	144 00		144 00					*		*						
3 50	168 00		168 00					*		*						
3 00	78 00		78 00					*		*						
5 00	175 00		175 00					*		*						
4 50	216 00		216 00					*		*						\$150
4 50	189 00		189 00					*		*						
3 00	156 00		156 00					*		*						
7 50	330 00		330 00					*		*						100
6 00	264 00		264 00					*		*						
3 30	183 80		183 80					*		*						
3 30	145 20		145 20					*		*						
7 50	292 50		292 50					*		*						
3 00	156 00		156 00					*		*						
3 50	331 50		331 50					*		*						
7 00	308 00		308 00					*		*						
6 00	238 00		238 00					*		*						
4 50	175 50		175 50					*		*						
3 00	156 00		156 00					*		*						
4 50	157 50		157 50					*		*						
3 00	132 00		132 00					*		*						
5 00	250 00		250 00					*		*						
5 00	260 00		260 00					*		*						60
23 50	1,222 00	\$200	1,422 00	\$1,422					\$12 50		2,000	1	\$5 00			500
20 00	1,040 00	18	1,058 00	1,058					14 00		2,000	1	5 00			1,800
9 00	315 00		315 00	315					6 00							125
9 00	396 00		396 00	396	\$1,500							1	5 00	19		1,800
10 00	510 00		510 00	440	1,500	\$100	\$50				2,000	1	4 50	23		1,600
19 50	1,014 00		1,014 00	700	800	45	250									1,000
12 00	624 00		624 00	350	1,000	300	250							11		1,200
13 00	624 00		624 00	624					15 00							800
12 00	612 00		612 00	612					12 00		3,000			15	\$25	1,000
12 00	528 00		528 00					\$80		\$4 00				24		200
12 00	624 00		624 00	624					10 00		200					300
12 00	468 00		468 00	468					7 00					17		150
6 25	396 00		396 00	396					3 00					19		300
8 25	280 50		280 50	280	1,500	1,200						1	8 00	8		500
8 25	321 75		321 75	321					3 50			1	8 00	8		150
8 25	214 50		214 50	214					4 00					9		150
8 00	312 00		312 00	312					4 00					8		250
7 50	330 00		330 00	330					7 00					8		200
9 00	465 80		465 80	540					7 00		300			8 1/2		50
16 50	643 50		643 50	643					18 00							1,000

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Pattern fitter.	29	U. S.	Germany	m	3	3			4	52		
Foreman	42	England.	England.	m	2	2			3	52		
"	38	Canada.	Scotland.	m	2	2			3	52		
Shipping clerk.	34	England.	Ireland.	m	4	4		1	6	52		
Foreman	52	Germany.	Germany.	m	6	3			4	50	2	shut down
Pattern fitter.	34	"	"	m	5	5	3	1	7	52		
"	33	"	"	m	1	1			1	51	1	no work
"	56	"	"	m	7	6	1		7	52		
Wood worker.	34	U. S.	U. S.	m	6	6	3		7	52		
Pattern maker	40	"	"	m	2	2			3	52		
Wood worker.	57	Germany.	Germany.	m	5	3	1		4	48	4	sickness
Laborer	48	"	"	m	7	7	3		8	45	6	no work
Wood worker.	40	"	"	m	4	4	2		5	51	1	"
"	40	Canada.	France.	m	7	7	3		8	50	2	"
Laborer	38	Germany.	Germany.	m	4	4	1		5	48	4	shut down
"	33	"	"	m	1	1			2	39	13	no work
"	44	"	"	m	8	8	3		9	44	8	"
"	41	"	"	m	2	2			3	44	8	"
"	39	"	"	m	2	2	1		3	13		first work in U. S.
"	31	"	"	m	2	2			3	26		"
Japanner.	18	U. S.	"	s						50	2	no work
Laborer	15	"	"	s						52		
"	17	"	"	s						42	10	no work
Wood worker.	19	Germany.	"	s						39	13	"
Machine hand.	15	Canada.	"	s						52		
Laborer	18	U. S.	Poland.	s						44	8	no work
Stove moulder.	16	Canada.	England.	s						35	17	sick and no work
Packer.	18	U. S.	Poland.	s						26	26	no work
Stove moulder.	24	"	Canada.	s				2	2	44	8	"
"	24	"	Ireland.	s				3	3	48	4	"
Machinist.	18	"	U. S.	s				1	1	51	1	"
Stove moulder.	21	"	Poland.	s				2	2	35	17	"
Molder.	23	Poland.	"	s						48	4	"
"	23	Germany.	Germany.	s						46	6	"
"	19	"	"	s				2	2	39	13	"
"	21	"	"	s				1	1	25	17	"
Grinder.	21	U. S.	France.	s				6	6	39	13	"
Molder.	22	Germany.	Germany.	s				2	2	39	13	"
"	25	"	"	s				2	2	52		
"	28	U. S.	"	s				1	1	46	6	no work
"	24	Germany.	"	s				1	1	39	13	"
"	25	U. S.	England.	s				2	2	35	17	"
"	27	Germany.	Germany.	s				1	1	48	4	shut down
"	26	U. S.	Ireland.	s				1	1	39	13	no work
Stove moulder.	20	Canada.	Germany.	s				2	2	39	13	"
Molder.	20	Germany.	"	s				2	2	39	13	"
Laborer.	21	"	"	s						44	8	"
Molder.	20	Poland.	Poland.	s						44	8	"
"	25	U. S.	"	s						39	13	"
Machinist.	27	"	Germany.	s				2	2	52		
Machine hand.	18	"	U. S.	s						46	6	no work
Grinder.	25	England.	England.	s						42		first work in U. S.
Pattern fitter.	29	U. S.	U. S.	s						48	4	no work
"	45	Germany.	Germany.	s						46	6	"
Wood worker.	33	Ireland.	Ireland.	s						52		

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.	Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.		If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$20 00	\$1,040 00		\$1,040 00	\$940	\$2,800		\$100								\$3,000
21 00	1,082 00	\$800	1,882 00	670	3,000		200			\$2,000			41		4,400
19 50	1,014 00		1,014 00	1,014	1,014			\$20 00		3,000			18	\$300	3,500
16 50	858 00		858 00	558	1,800		300						17		2,500
25 00	1,250 00		1,250 00	1,250	2,000						2	\$10 00	38		2,300
14 00	728 00		728 00	630	1,100	\$1,000	25						7	25	300
12 00	612 00		612 00	612				6 00			1	5 00	10	200	300
9 90	514 80	250	764 80	764				7 00				1	5 00	16	300
12 00	624 00		624 00	540			60	7 00		2,245	1	5 00			800
18 00	998 00	146	1,082 00	1,082				15 00		15,000					5,000
12 00	576 00		576 00	576				6 00					40		
9 00	414 00	250	664 00	664	1,000					200	1	5 00	15		1,200
11 10	566 10		566 10	491	1,200		75						17	200	2,000
12 00	600 00		600 00	600				25 00		5,000	1	20 00	20		1,000
9 00	432 00		432 00	432				7 00					25		400
10 50	409 50		409 50	409				8 50		700			18		300
9 80	431 20		431 20	381	1,250	1,150	100				1	5 00	10		650
9 00	396 00		396 00	396	800					100	1	5 00	18		1,000
7 50	97 50		97 50	97				8 50					12		100
7 50	195 00		195 00	195				4 00		250	1	5 00	1/2	25	
9 00	450 00		450 00				*		*						
3 00	156 00		156 00				*		*						
4 50	189 00		189 00				*		*						
4 50	175 50		175 50				*		*				17		50
3 00	156 00		156 00				*		*				14		
4 50	198 00		198 00				*		*						
6 25	218 75		218 75				*		*				12		
6 00	156 00		156 00				*		*						
9 00	896 00		896 00	396			*		*						100
10 00	480 00		480 00	480			*		*						200
8 10	418 10		418 10	418			*		*						150
10 00	850 00		850 00	300			35		*						75
7 50	360 00		360 00				*		*				21		60
5 00	230 00		230 00				*		*				8		30
7 50	292 50		292 50	292			*		*				7		20
7 00	245 00		245 00	245			*		*						
8 25	321 75		321 75	321			*		*	800			9		60
7 00	273 00		273 00	273			*		*				11		15
4 50	234 00		234 00	234			*		*				9		25
8 00	368 00		368 00	368			*		*						80
12 00	468 00		468 00	468			*		*				10		50
9 00	315 00		315 00	815			*		*	2,000	1	5 00			150
9 00	432 00		432 00	432	1,000	175	*		*				18		1,200
12 00	468 00		468 00	468			*		*						125
7 50	292 50		292 50	292			*		*				18		50
9 00	351 00		351 00	351			*		*				10		
9 00	396 00		396 00				*		*						
8 00	264 00		264 00				*		*	100	1	5 00	2		100
7 00	273 00		273 00				*		*				5		60
15 00	790 00		790 00	625	1,600	1,900	150		3 00		1	5 00			50
7 50	345 00		345 00				*		*						
7 50	315 00		315 00				*		*				10 mo	50	150
7 50	360 00		360 00				*		*						100
9 80	455 40		455 40				100		4 00				6	25	75
12 00	624 00		624 00						3 50				6		450

* Lives at home and gives wages to parents.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Crater	20	Canada	England	s						4		first work in U. S.
Stove mounter	19	U. S.	Ireland	s						26	29	
	25	"	U. S.	s						26	28	no work
Pattern filer	21	"	Germany	s						81	21	
Metal polisher	30	"	Ireland	s				2	2	87	15	"
Laborer	41	Germany	Germany	m	6	6	1		7	35	17	"
"	33	"	"	m	2	2			4	44	8	"
"	37	"	"	m	2	2	2		3	44	8	"
Foreman	33	"	"	m	2	2		2	6	36	16	sickness
Nickle plater	23	U. S.	U. S.	s						48	4	no work
Stove mounter	18	"	Germany	s						26	26	"
Tinner	23	Canada	Canada	s						26	26	"
	20	U. S.	England	s						50	2	
Packer	22	"	Germany	s						48	4	shut down
Pattern maker	18	"	Ireland	s						26	26	no work
"	21	"	Canada	s						39	13	"
"	24	"	Ireland	s						50	2	laid off voluntarily
"	23	"	Germany	s						44	8	sickness
"	27	"	Ireland	s						26	26	no work
Foreman	32	"	"	s				4	4	52		
Pattern maker	21	"	Germany	s						48	4	sickness
THE HENRY C. HART MANUFACTURING CO.												
Blacksmith	38	Germany	Germany	m	4	4	2		5	52		
Brass finisher	37	"	"	m	1	1			2	44	8	no work
"	37	Belgium	Belgium	m	4	4	1		5	48	4	"
"	28	U. S.	Germany	m	1				1	52		
"	42	Germany	"	m	3	3			4	52		
Locksmith	29	"	"	m	2	2			3	52		
"	31	Russia	Russia	m	1	1			2	52		
"	32	Germany	Germany	m	3	3		1	5	52		
Brass finisher	34	Poland	Poland	m	3	3	2		4	39	13	no work
"	33	Norway	Norway	m	3	3	1		4	39	13	
"	27	Germany	Germany	m	1	1			2	32	20	"
Foreman	24	U. S.	U. S.	m	1				1	52		
Molder	28	"	Germany	m	1	1			2	42	10	no work
"	28	"	"	m	3	3			4	44	8	"
"	22	"	U. S.	m					1	46	6	sickness
"	31	"	Germany	m	2	2	1		3	39	13	no work
"	22	Germany	"	m	1	1			2	52		
"	24	U. S.	U. S.	m	2	2			3	44	8	no work
"	29	"	Germany	m					1	48	4	"
"	35	Canada	Canada	m	6	6	3		7	44	8	"
Brass molder	45	U. S.	England	m	1	1			2	52		
"	30	Canada	Canada	m	4	4	1		5	44	8	no work
Machinist	28	Germany	Germany	m	1	1			2	47	5	"
Metal polisher	42	"	"	m	4	4	4		5	52		
Furnace tender	45	"	"	m	5	4	1		5	35	17	no work
Brass molder	45	"	"	m					1	22	30	sick and no work
Cupola tender	42	"	"	m	2	2	1		3	45	7	no work
Brass molder	23	Canada	Canada	m	1				1	52		
Metal worker	27	Germany	Germany	m	1	1		2	4	52		
Pattern maker	24	Canada	U. S.	m	1				1	42	10	no work
Foreman	26	U. S.	"	m	1	1			2	52		
Engineer	26	"	Germany	m					1	28	26	no work

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TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$30 00		\$30 00							\$4 00		1	\$4 00	2mo		\$70
10 50	273 00		273 00					\$100		3 50						450
12 00	312 00		312 00							6 00						50
8 00	248 00		248 00							4 00						100
8 00	296 00		296 00					150		4 50		1	5 00			200
8 00	290 00		290 00	\$280	\$1200							1	5 00	13		1,400
9 00	396 00		396 00	396	350	\$100					\$80			14		600
9 00	396 00		396 00	396	500							1	5 00	10		575
24 00	864 00	\$150	1,014 00	1,014	1,100						2,000	2	10 00	8	\$75	1,400
7 50	360 00		360 00					30		5 00						80
9 00	234 00		234 00							4 50						150
12 00	312 00		312 00					50		4 00				8		100
6 00	300 00		300 00							4 00						400
7 50	360 00		360 00							3 00						80
7 50	195 00		195 00							3 00						
10 50	409 50		409 50					150		5 00						1,500
9 00	450 00		450 00							4 00						400
9 50	418 00		418 00					100		4 50		1	5 00			200
18 00	468 00	48	516 00							4 00						1,000
20 00	1,040 00	500	1,540 00	540	3,000			1,000								5,000
15 00	720 00		720 00					60		4 00						1,000
12 00	624 00		624 00	624					\$6 50		500	2	15 00	9	300	300
9 00	396 00		396 00	396					4 50					4		150
7 50	360 00		360 00	360					5 00					2	50	250
13 50	702 00		702 00	702					8 00		800	1	3 50			800
9 00	468 00	200	668 00	668	1,600						2,000	1	5 00	10	5	1,800
11 00	572 00		572 00	520				50	3 50					7		500
9 00	468 00		468 00	468					4 00					2		300
12 00	624 00		624 00	549	1,000						500	1	5 00	9	400	1,300
8 00	312 00		312 00	312					5 00					15		250
7 50	292 50		292 50	292					6 00					9		500
7 50	240 00		240 00	290					5 00					6		100
13 50	702 00		702 00	702					14 00							850
15 00	630 00		630 00	630					8 00		2,000	1	5 00			300
15 00	690 00		690 00	435	1,800	850	\$200				2,000	1	5 00			1,500
8 75	402 50		402 50	375				25	5 00							200
15 00	585 00		585 00	585					10 00							250
15 00	730 00		730 00	630				150	6 50			1	5 00	11		300
14 00	616 00		616 00	616					8 50			1	5 00			300
18 00	864 00		864 00	700				150	8 00		1,000					600
15 00	660 00	150	810 00	375	1,600			400			2,000	1	5 00	16	650	2,000
18 00	936 00	300	1,236 00	1,000				200	16 00		2,000	1	5 00			9,000
15 00	660 00		660 00	660					7 00					11		200
8 10	390 70		390 70	390					6 00					10	200	400
12 00	624 00		624 00	584	700	400	40					1	5 00	22	15	500
10 50	367 50	300	667 50	667	150							1	5 00	8½		500
15 00	330 00		330 00	330					8 00			2	10 00	14		500
12 00	540 00		540 00	540	900	400						1	5 00	17		700
15 00	780 00		780 00	780					6 00					5		800
8 40	438 80		438 80	385				50	free			1	5 00	5	40	250
12 00	504 00		504 00	454				50	6 00					14		250
9 90	514 80		514 80	514					6 00			1	5 00			200
14 00	364 00		364 00	364					10 00							150

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Electro plater	48	U. S.	Ireland	m	4	4	2		5	52		
Porter	47	Norway	Norway	m	5	4	1		5	37	15	sick and no work
Polisher	28	U. S.	Germany	m	3	3			3	52		
Lacquerer	37	Germany	"	m	1	1			1	52		
Metal polisher	29	U. S.	France	m	2	2		1	4	52		
"	32	Germany	Germany	m	3	3			4	52		
"	32	"	"	m	3	3	1		4	52		
"	28	Norway	Norway	m	3	3		1	2	52		
Brass finisher	31	Germany	Germany	m	2	2			3	52		
Locksmith	34	"	"	m	2	2			3	52		
Foreman	35	U. S.	U. S.	m	1	1		1	3	52		
"	57	"	"	m	1	1			1	44	8	no work
Pattern filer	31	Holland	Holland	m	1	1			2	46	6	"
" maker	26	U. S.	U. S.	m	1	1			2	44	8	"
Metal polisher	23	"	"	m					1	52		
Laborer	33	Germany	Germany	m	3	3			4	39	13	no work
Metal polisher	30	Poland	Poland	m	2	2		1	4	30	22	"
"	35	U. S.	Germany	m	3	3	3		4	17	35	accident & no work
"	32	"	U. S.	m	2	2		1	4	52		
"	46	Germany	Germany	m	4	4	2		5	52		
Brass molder	23	U. S.	U. S.	m	1	1			2	52		
Metal polisher	30	"	Germany	m	2	2			3	30	22	no work
"	26	Germany	"	m	3	3		2	6	46	6	"
Laborer	47	"	"	m	2	2			3	39	13	"
"	36	"	"	m	4	4	2		5	34	18	"
Brass molder	25	U. S.	"	m	1	1		1	3	32	20	"
Machine hand	40	Germany	"	m	1	1			2	52		
Laborer	39	"	"	m	3	3	3		4	52		
Brass molder	26	U. S.	U. S.	m	2	2			3	52		
Metal polisher	26	"	Germany	wr				1	1	50	2	laid off
Helper	56	Poland	Poland	wr	5	2			2	44	8	no work
Metal polisher	45	Switzerl'd	Switzerl'd	wr	1				1	34	18	"
"	25	Canada	Canada	s					1	50	2	"
Lacquerer	23	U. S.	U. S.	s				8	8	35	17	"
Laborer	33	"	"	s				1	1	35	17	"
Brass molder	28	"	Germany	s				1	1	26	26	"
" finisher	21	"	U. S.	s				2	2	52		
Laborer	30	"	Germany	s				2	2	50	2	no work
Molder	25	Germany	"	s						46	6	"
Melter	21	"	"	s						28	24	"
Brass finisher	22	U. S.	"	s						46	6	"
"	25	England	Ireland	s				3	3	50	2	vacation
"	28	U. S.	U. S.	s				1	1	32	20	no work
"	15	"	Germany	s						48	4	"
"	21	Germany	"	s						48	4	"
"	16	U. S.	U. S.	s						26		first work
"	14	Germany	Germany	s						28		"
"	15	U. S.	"	s						17		"
"	20	"	Canada	s						39	13	no work
"	18	Germany	Germany	s						48	4	"
"	15	U. S.	"	s						44	8	"
"	16	"	"	s						52		
"	22	"	"	s						53		
"	34	Switzerl'd	Switzerl'd	wr				1	1	32	20	no work
"	16	U. S.	Germany	s						44	8	"

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$23 50	\$1,170 00	\$200	\$1870 00	\$1870					\$10 00		\$2,000	1	\$5 00			\$500
9 00	333 00		333 00	333	\$1600	\$300					2,000	1	5 00			1,500
21 00	1092 00		1092 00	792				\$300	12 00							1,200
9 00	468 00		468 00	468					10 00			1	5 00	9		600
8 25	429 00		429 00	429					7 00							100
11 00	572 00		572 00	475				75	5 00		500	2	10 00	10		500
11 00	572 00		572 00	450	800	400	\$75				550	1	5 00	7	\$175	700
9 50	494 00		494 00	494					7 00		2,000	1	5 00	8		150
8 00	416 00		416 00	416	1800	700								17		980
8 00	416 00		416 00	416	800	500					800	1	5 00	7	500	400
18 00	986 00		986 00	736				200	10 00		2,700					1,000
9 00	462 00	96	558 00	546					6 00		8,000					800
9 00	414 00	200	614 00	614					6 00					9	100	300
12 00	528 00		528 00	390	600	300	100	25								500
14 40	748 80		748 80	748					4 00							150
7 50	292 50		292 50	292					6 00			1	4 00	19	15	400
13 50	405 00		405 00	405	1150	600			5 00							900
11 50	195 50		195 50	295					10 00							500
12 00	624 00		624 00	624							1,000			6	200	85
9 50	494 00		494 00	370	700	400	100									700
15 00	780 00		780 00	780					10 00							500
12 00	360 00		360 00	360					6 00							150
10 00	460 00		460 00	340				100	6 00		2,000	1	4 00	10		400
7 50	292 50	150	442 50	442					4 00		600	1	5 00	4	10	300
10 50	337 00		337 00	337					4 00					8		300
15 00	480 00		480 00	480					8 00							800
9 00	468 00	200	668 00	525	2000		100		8 00		3,000	1	5 00	32		2,800
10 20	580 40	150	680 40	680					8 00		2,000	1	5 00	21		900
15 00	780 00		780 00	675				100	12 00			1	5 00			350
6 00	300 00		300 00	300					4 00							200
8 40	399 60	150	519 60	519					3 00					2	800	100
7 50	255 00		255 00							\$4 00	500	1	5 00	8		250
8 00	420 00		420 00	420										10		200
7 50	262 50		262 50	262												150
7 50	262 50		262 50	262					6 50							150
13 50	351 00		351 00	351								1	5 00			500
8 00	416 00		416 00	390					6 00							350
7 50	375 00		375 00	375					7 00			1	10 00			80
13 50	621 00	80	651 00	651				800		2 50		1	5 00	8		1,700
7 50	210 00		210 00					15		8 50				1½		100
10 50	488 00		488 00							3 50						850
14 48	724 00		724 00							5 00				21		150
10 50	396 00		396 00							5 00						50
3 00	144 00		144 00					*			120					
9 00	482 00		482 00							8 00				7		156
3 00	78 00		78 00						*	*						
3 00	84 00		84 00						*	*						
3 00	51 00		51 00						*	*						
12 00	468 00		468 00					94		4 00						200
4 50	216 00		216 00							2 50				2½		
3 50	154 00		154 00						*	*						
3 90	202 80		202 80						*	*						
7 50	390 00		390 00					75		3 50						200
7 50	240 00		240 00							3 50	235	1	5 00	10½		100
3 00	182 00		182 00					*		*						

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer.	16	U. S.	Germany	s						52		
Brass finisher	16	"	"	s						44	8	no work
	23	"	"	s						44	8	"
Laborer	17	Germany	"	s						26	26	"
	16	U. S.	"	s						26		first work
"	16	"	"	s						48	4	no work
"	14	Germany	"	s						52		
"	17	U. S.	"	s						52		
"	16	Poland	Poland	s						26	26	no work
"	25	Switz.	Switz.	s						35	17	"
"	14	Germany	Germany	s						52		
	18	Canada	Canada	s						39	13	not answered
Brass finisher	27	Germany	Germany	s						30	22	sickness
"	21	"	"	s			2	2	2	52		
"	22	"	"	s						52		
Laborer.	26	Switz.	Switz.	s						48	4	no work
Brass finisher	20	Russia.	Russia.	s			1	1	1	20		first work in U. S.
	17	U. S.	Poland	s						52		
Machine hand	19	"	Germany	s						52		
Brass finisher	18	"	England	s						52		
"	19	"	Germany	s						39	13	no work
"	34	Switz.	Switz.	s						52		
Laborer.	16	U. S.	Germany	s						49	3	no work
"	16	Germany	"	s						30	13	"
"	16	U. S.	"	s						52		
Brass finisher	32	Germany	"	s						52		
Machinist.	26	Canada	Canada	s						50	2	no work
Stamper	20	U. S.	Germany	s						51	1	"
Machine hand	21	"	"	s			1	1	1	44	8	"
Laborer	22	"	Canada	s						39	13	"
Brass finisher	19	"	Germany	s						44	8	"
"	29	Germany	"	s						26		first work in U. S.
Laborer	17	U. S.	"	s						52		
"	16	"	"	s						52		
Molder	17	"	"	s						52		
"	25	"	U. S.	s						44	8	vacation
"	22	"	Germany	s						44	8	no work
Laborer	16	Germany	"	s						48	4	"
Molder	25	"	"	s			1	1	1	48	4	"
"	25	U. S.	"	s						39	13	sick and no work
"	28	"	England	s			1	1	1	44	8	no work
"	22	"	Germany	s						44	8	"
Brass molder.	25	"	U. S.	s			1	1	1	32		
Laborer	16	Canada	Canada	s						52		
Core maker	18	U. S.	U. S.	s						26	26	no work
"	17	"	Germany	s						26	26	"
"	18	"	"	s						44	8	"
"	18	"	"	s						52		
Laborer	24	"	"	s			2	2	2	52	2	no work
Brass molder	17	"	"	s			1	1	1	26		first work
Core maker	17	"	"	s						26	26	no work
Laborer	24	Germany	"	s						46	6	"
Core maker	19	U. S.	"	s						49	3	"
Brass finisher	17	"	"	s						44	8	"
Brass molder	27	Ireland	Ireland	s			1	1	1	18	34	sickness

TABLE No. 1—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owing a home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$3 00	\$156 00		\$156 00					*		*						
3 50	154 00		154 00					*		*						
3 00	352 00		352 00					*		\$2 50						\$100
3 00	78 00		78 00					*		*				10		
3 00	78 00		78 00					*		*						
3 00	144 00		144 00					*		*						
3 00	156 00		156 00					*		*				6		
3 00	156 00		156 00					*		*						
3 00	78 00		78 00					*		*				5	\$100	200
7 50	262 50		262 50					*		\$ 50						
3 00	156 00		156 00					*		*				8		
3 00	117 00		117 00					*		*						
9 00	270 00		270 00					*		\$ 25					50	150
8 40	436 80		436 80	\$436				*	†	3 00				20	100	
9 00	468 00		468 00					\$200		3 00		1	\$5 00	2	40	400
7 00	336 00		336 00					50		3 50				7		250
8 40	168 00		168 00					*		3 50				½	50	100
3 50	182 00		182 00					*		*						
7 50	390 00		390 00					*		3 00						50
6 00	312 00		312 00							3 00						
6 80	257 40		257 40							3 00						75
9 00	416 00		416 00					*		3 50	\$500	1	5 00	10	100	100
3 00	147 00		147 00					*		*						
3 80	140 40		140 40					*		*				10		
3 00	156 00		156 00					*		*						
9 00	416 00		416 00							3 50	500	1	5 00	7		150
12 00	600 00		600 00					100		3 50				3	50	250
6 00	306 00		306 00					*		*						25
7 00	306 00		306 00					*		3 50						60
9 00	351 00		351 00					*		3 50						150
7 50	343 20		343 20					*		*						100
9 00	234 00		234 00					*		3 50				¾	30	75
3 80	187 20		187 20					*		*						
3 50	182 00		182 00					*		*						
6 00	312 00		312 00							3 00						
12 00	528 00		528 00					*		3 75		1	5 00			100
13 50	594 00		594 00					*		5 00	2,000	1	15 00			500
3 00	144 00		144 00					*		*				7		
13 50	648 00		648 00					50		5 00				10		200
15 00	585 00		585 00					*		5 00						250
15 00	660 00		660 00					*		9 00						700
15 00	660 00		660 00					*		6 00						450
12 00	624 00		624 00					*		4 00						500
3 50	182 00		182 00					*		*				5		
4 50	117 00		117 00							2 50						
4 00	104 00		104 00					*		*						
3 60	132 00		132 00					*		*	100					
3 50	182 00		182 00					*		*						
7 50	375 00		375 00					*		3 00						100
9 00	208 00		208 00					*		*						
8 00	78 00		78 00					*		*						
7 50	345 00		345 00					50		3 50				15		100
8 00	147 00		147 00					*		*	118					40
6 00	264 00		264 00					*		*						
15 00	270 00		270 00					*		7 50				23		40

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Brass molder	20	U. S.	Switz.	s					52		
"	20	"	Germany	s					50	2	no work
Driller	16	"	Poland	s					35	17	
"	16	"	"	s					48	4	"
Metal worker	22	Germany	Germany	s					52		
Pattern maker	22	U. S.	Ireland	s					52		
Burnisher	26	Canada	Canada	s					52		
Packer	24	U. S.	Ireland	s					52		
"	20	"	Germany	s					39	13	no work
Laborer	18	"	"	s					35	17	"
"	15	Germany	"	s					52		
Shipping clerk	22	U. S.	U. S.	s					52		
Laborer	15	Germany	Germany	s					35	17	sick and no work
"	16	U. S.	Canada	s					44	8	no work
Grinder	17	"	Germany	s					44	8	"
"	16	"	"	s					52		
"	22	Canada	Ireland	s					52		
"	20	Holland	Holland	s					39	13	no work
"	18	U. S.	U. S.	s					26	26	"
Stamper	20	"	"	s					22	30	sick and no work
Office boy	15	"	"	s					52		
Japanner	15	"	Canada	s					44	8	no work
Laborer	15	Germany	Germany	s					48	4	accident
Electro plater	21	U. S.	"	s					19	33	no work
"	20	Germany	"	s					52		
Laborer	23	U. S.	"	s					30	22	no work
"	21	"	U. S.	s					47	5	"
Electro plater	25	England	England	s					52		
Metal polisher	16	U. S.	Germany	s					49	3	accident
"	17	Germany	"	s					44	8	accident & no work
"	15	U. S.	"	s					39	13	no work
"	23	"	"	s					44	8	"
"	19	Germany	"	s					53		
"	20	"	"	s			1	1	48	4	no work
"	23	Canada	Scotland	s			1	1	35	17	"
Pattern maker	27	U. S.	Ireland	s			2	2	52		
Laborer	16	"	U. S.	s					37	15	no work
Metal polisher	29	Germany	Germany	s					52		
"	28	U. S.	Scotland	s					52		
Laborer	29	Germany	Germany	s					52		
Metal polisher	22	England	England	s					22	30	no work
Brass molder	29	Switz.	Switz.	s					39	13	"
"	18	Germany	Germany	s					52		
"	19	U. S.	U. S.	s			1	1	52		
"	23	"	"	s					35	17	no work
"	25	"	Germany	s					52		
"	20	Germany	"	s					52		
Laborer	16	"	"	s					35		first work in U. S.
Brass molder	40	U. S.	U. S.	s					52		
"	22	Canada	Canada	s					52		
"	20	U. S.	U. S.	s			2	2	35	17	accident & no work
"	18	"	Germany	s					39	13	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 50	\$546 00	.....	\$546 00	.....	.....	.....	.....	.....	.....	\$4 00	.....	.....	.....	.....	.....	\$200
6 00	300 00	.....	300 00	.....	.....	.....	.....	.....	.....	2 75	.....	1	\$25 00	.....	.....	50
4 50	157 50	.....	157 50	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
4 50	216 00	.....	216 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
8 10	421 20	.....	421 20	.....	.....	.....	.....	\$25	.....	3 50	.....	1	5 00	4	\$100	100
12 00	624 00	.....	624 00	.....	.....	.....	.....	ref'd	.....	3 50	.....	.....	.....	.....	.....	500
5 50	286 00	.....	286 00	.....	.....	.....	.....	50	.....	3 50	.....	.....	.....	23	.....	200
10 00	520 00	.....	520 00	.....	.....	.....	.....	50	.....	4 00	.....	.....	.....	.....	.....	1,000
7 50	292 50	.....	292 50	.....	.....	.....	.....	.....	.....	3 50	.....	.....	.....	.....	.....	25
6 00	310 00	.....	310 00	.....	.....	.....	.....	.....	.....	3 50	.....	.....	.....	.....	.....	.....
2 50	130 00	.....	130 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	5	.....	.....
15 00	780 00	.....	780 00	.....	.....	.....	.....	.....	.....	5 00	.....	.....	.....	9	.....	200
3 50	122 50	.....	122 50	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
4 00	176 00	.....	176 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
5 40	237 60	.....	237 60	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
2 50	130 00	.....	130 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
6 00	312 00	.....	312 00	.....	.....	.....	.....	*	.....	5 00	.....	.....	.....	7	.....	35
5 40	210 60	.....	210 60	.....	.....	.....	.....	*	.....	*	.....	.....	.....	10	.....	80
5 10	132 60	.....	132 60	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
5 75	126 50	.....	126 50	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	85
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
3 00	132 00	.....	132 00	.....	.....	.....	.....	*	.....	3 00	.....	.....	.....	.....	.....	.....
4 00	192 00	.....	192 00	.....	.....	.....	.....	*	.....	4 00	.....	.....	.....	5	.....	80
10 50	199 50	.....	199 50	.....	.....	.....	.....	*	.....	*	.....	.....	.....	10	.....	25
9 00	468 00	.....	468 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 50	225 00	.....	225 00	.....	.....	.....	.....	.....	.....	3 00	.....	.....	.....	.....	.....	50
6 00	282 00	.....	282 00	.....	.....	.....	.....	.....	.....	3 00	.....	.....	.....	.....	.....	50
12 00	624 00	.....	624 00	.....	.....	.....	.....	.....	.....	5 00	.....	.....	.....	6	350	75
4 50	220 50	.....	220 50	.....	.....	.....	.....	.....	.....	free	\$50	.....	.....	.....	.....	.....
3 00	132 00	.....	132 00	.....	.....	.....	.....	.....	.....	2 00	.....	.....	.....	11	.....	.....
2 50	136 50	.....	136 50	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	.....
7 50	330 00	.....	330 00	.....	.....	.....	.....	.....	.....	3 50	.....	.....	.....	7	.....	50
8 40	436 80	.....	436 80	.....	.....	.....	.....	.....	.....	3 50	.....	.....	.....	5	.....	50
8 50	408 00	.....	408 00	.....	.....	.....	.....	.....	.....	3 75	.....	.....	.....	7	.....	100
13 00	455 00	.....	455 00	.....	.....	.....	.....	.....	.....	4 50	.....	.....	.....	.....	.....	2,000
10 50	546 00	.....	546 00	.....	.....	.....	.....	*	.....	4 00	.....	.....	.....	.....	.....	50
3 00	111 00	.....	111 00	.....	.....	.....	.....	.....	.....	*	.....	.....	.....	.....	.....	.....
9 00	468 00	.....	468 00	.....	.....	.....	.....	.....	.....	3 50	.....	.....	.....	5	700	500
13 50	702 00	.....	702 00	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	.....	.....	90
7 50	390 00	.....	390 00	.....	.....	.....	.....	50	.....	4 00	.....	.....	.....	3	.....	200
8 10	178 20	.....	178 20	.....	.....	.....	.....	.....	.....	5 00	.....	.....	.....	20	.....	150
12 00	468 00	.....	468 00	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	19	.....	200
6 00	312 00	.....	312 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	15	.....	.....
12 00	624 00	.....	624 00	.....	.....	.....	.....	.....	.....	7 50	.....	.....	.....	.....	.....	800
15 00	525 00	.....	525 00	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	.....	.....	65
15 00	780 00	.....	780 00	.....	.....	.....	.....	250	.....	4 00	.....	.....	.....	.....	.....	750
15 00	780 00	.....	780 00	.....	.....	.....	.....	125	.....	3 50	.....	.....	.....	6	.....	800
4 50	157 50	.....	157 50	.....	.....	.....	.....	*	.....	*	.....	.....	.....	3	.....	.....
24 00	1243 00	.....	1,243 00	.....	.....	.....	.....	500	.....	5 00	.....	.....	.....	.....	.....	800
13 50	702 00	.....	702 00	.....	.....	.....	.....	100	.....	4 50	.....	1	5 00	18	.....	800
13 50	472 50	.....	472 50	.....	.....	.....	.....	.....	.....	4 00	.....	.....	.....	.....	.....	800
4 50	175 50	.....	175 50	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....	60

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Nut tapper.	23	Germany	Germany	s						49	3	no work
Packer	19	U. S.	Germany	s						35	17	
Japanner.	18	"	Canada	s						48	4	"
"	18	Germany	Germany	s						44	8	"
"	16	Canada	England	s						49	3	"
"	16	Germany	Germany	s						52		
"	16	U. S.	Canada	s						52		
Packer	15	Canada		s						50	2	no work
Nut tapper.	15	U. S.	Germany	s						32		first work
"	14	"	Ireland	s						44		
Laborer	16	"	France	s						44	8	no work
Packer	18	Canada	Canada	s						49	3	
Polisher	18	U. S.	Germany	s						52		
"	19	Germany	"	s						13		first work in U. S.
"	17	"	"	s						52		
Wiper	14	U. S.	"	s						45		first work
"	15	"	"	s						52		
Lacquerer	22	"	"	s						52		
Box maker	17	"	Ireland	s						49	3	vacation
Packer	18	Germany	Germany	s						44	8	no work
Wiper	17	U. S.	U. S.	s						44	8	"
Finisher	19	"	Belgium	s						48	4	"
Lacquerer	20	Germany	Germany	s						52		
"	18	"	"	s						44	8	no work
Wiper	15	"	"	s						44	8	"
"	20	"	"	s						39	13	"
Wiper	22	Canada	Canada	s						32	20	sick and no work
Wiper	17	U. S.	Ireland	s						44	8	no work
Wiper	16	"	Germany	s						52		
"	15	"	"	s						15		first work
Lacquerer	18	"	U. S.	s						52		
Packer	22	"	Ireland	s				2	2	52		
"	17	Canada	"	s						17		first work
"	19	U. S.	U. S.	s						39	13	no work
"	23	Canada	Canada	s						52		
"	18	U. S.	U. S.	s						52		
"	26	"	Ireland	s						52		
Gilder	23	"	U. S.	s						50	2	sickness
"	22	Germany	Germany	s						52		
Packer	17	U. S.	U. S.	s						47	5	no work
Nut tapper.	20	Germany	Germany	s						52		
Core maker.	29	"	"	m	3	3	1		4	52		
Molder	27	U. S.	Ireland	m	1	1			2	39	13	no work
Locksmith	32	Germany	Germany	m	1	1			2	34	18	sick and no work
Brass finisher	24	U. S.	"	m	1	1			2	48	4	no work
"	23	Germany	"	m	2	2		2	5	39	13	"
"	56	Norway	Norway	m	5	1			2	52		
"	29	Germany	Germany	m	2	2			3	39	13	no work
Brass filer	45	"	"	m	7	4	2		5	52		
Brass finisher.	32	"	"	m	1	1			2	26	26	no work
"	29	"	"	m	1	1			2	48	4	"
Laborer	37	Poland	Poland	m	4	4	1		5	42	10	"
"	38	Germany	Germany	m	4	4	2		5	49	3	"

TABLE No. 1—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
25 50	\$171 50		\$171 50					*		*				7		
25 00	105 00		105 00					*		free	\$200					
25 00	144 00		144 00					*								
25 50	154 00		154 00					*		*				12		
25 00	147 00		147 00					*		*				10		
25 00	156 00		156 00					*		*				8		\$125
25 00	156 00		156 00					*		free	500			10		
25 00	150 00		150 00					*								
25 00	96 00		96 00					*		*	115					
25 00	132 00		132 00					*		free						
25 00	132 00		132 00					*		\$3 00	125			10		
25 50	171 50		171 50					*		*						
25 00	156 00		156 00					*		*						
25 00	89 00		89 00					*		*				14	\$25	25
25 00	156 00		156 00					*		*				8		
25 00	185 00		185 00					*		*						
25 00	156 00		156 00					*		*						
25 50	182 00		182 00					*		*						35
4 50	220 50		220 50					*		*				15		
2 50	154 00		154 00					*		12 00						
2 00	132 00		132 00					*		2 00				7		40
2 00	144 00		144 00					*								35
2 50	182 00		182 00					*								
2 50	154 00		154 00					*		2 50				7		
2 00	132 00		132 00					*		*				7		
2 00	117 00		117 00					*		*				18		30
2 00	96 00		96 00					*		2 00				4		40
2 00	132 00		132 00					*		*						
2 00	156 00		156 00					*		*						
2 00	45 00		45 00					*		2 00						
2 50	182 00		182 00					*								
4 00	206 00		206 00					*		2 50						30
2 00	51 00		51 00					*						16		
2 50	136 50		136 50					*		*						25
4 00	206 00		206 00					*		*				11		
4 00	206 00		206 00					*		28 00						
2 50	182 00		182 00					*		28 50						175
2 60	180 00		180 00					*		28 00						30
2 50	182 00		182 00					*		*				13		40
2 87	134 89		134 89					*		*				16		
2 50	182 00		182 00					*		*				18		35
12 00	655 20		655 20	\$655					\$7 00		1	\$5 00		18		150
15 00	595 00		595 00	585					8 00		1	5 00				1,500
8 00	272 00		272 00	290	\$1,300	\$975	\$104				1	15 00		6		500
7 50	360 00		360 00	360					5 00							250
10 00	360 00		360 00	390					7 00		1,000	2	10 00	9		150
14 00	728 00		728 00	728					8 00					21		500
7 50	262 50		262 50	262					4 75			1	5 00	8	200	200
7 50	390 00		390 00	310	1,000	300	60				550			7	300	1,200
7 75	201 50		201 50	300					5 00			1	5 00	8		250
8 00	334 00		334 00	334				\$50	6 00					20		300
7 50	315 00	\$100	415 00	365				50	5 00			1	4 00	11	100	350
7 50	367 50		367 50	367					6 00		1,000			20		250

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Brass finisher.....	33	Germany	Germany	m	3	3			4	44	8	no work
Carpenter.....	26	"	"	m	1	1			2	51	1	not answered
".....	26	"	"	m	1	1		1	2	44	2	no work
Brass finisher.....	29	"	"	m	1	1			2	50		
Locksmith.....	39	"	"	m	3	3	1		4	53		
".....	34	"	"	m	4	4			5	38	14	sick and no work
".....	30	Poland	Poland	m				1	1	48	4	no work
".....	39	Germany	Germany	m				3	3	39	13	
Brass finisher.....	29	"	"	m	1	1			2	50	23	sickness
Locksmith.....	37	"	"	m	6	6	3	1	8	52		
Brass finisher.....	32	"	"	m	1	1		2	4	44	8	no work
Brass filer.....	50	"	"	m	6	6	2		7	48	4	
Brass finisher.....	58	England	England	m	5	5			1	52		
".....	40	Poland	Poland	m	3	5	2		6	52		
".....	55	Germany	Germany	m	3				1	52		
".....	40	"	"	m	5	5	2		6	52		
".....	37	"	"	m	2	2			3	52		
Machine hand.....	27	U. S.	U. S.	m				1	2	26		no work
Locksmith.....	47	Germany	Germany	m	3	3			3	34	18	"
".....	32	"	"	m	3	3			4	8		first work in U. S.
Brass finisher.....	47	Canada	Canada	m	7	6	2		7	34	18	sick and no work
".....	21	U. S.	Germany	m					1	52		
".....	26	Germany	"	m	1	1			2	52		
Brass filer.....	22	"	"	m					1	34	18	no work
Machinist.....	32	"	"	m	4	4		1	6	52		
".....	37	"	"	m	2	2	1		3	48	4	sickness
Laborer.....	43	"	"	m	1	1	1		2	52		
RUSSELL WHEEL AND FOUNDRY CO.												
Laborer.....	24	Germany	"	m				1	2	52		
".....	27	England	Ireland	m					1	43		first work in U. S.
Molder.....	44	U. S.	Germany	m	1	1			2	52		
".....	36	"	Ireland	m	1	1	1		2	8	44	sickness
".....	46	"	"	m	8	8	8		9	52		
Carpenter.....	28	Germany	Germany	m	4	4			5	52		
Molder.....	49	U. S.	Ireland	m	1	1			2	52		
".....	49	Germany	Germany	m	6	6	1		7	52		
Laborer.....	29	Poland	Poland	m					1	44	8	no work
Molder.....	43	U. S.	Ireland	m	6	6	4		7	52		
Core maker.....	40	Germany	Germany	m	7	7	4		8	52		
Molder.....	49	Scotland	Scotland	m	6	6			7	52		
".....	40	U. S.	France	m	3	3	2		4	52		
Laborer.....	26	Poland	Poland	m	2	2			3	34	18	no work
".....	44	Germany	Germany	m	6	6			7	30	22	accidents
".....	37	"	"	m	3	3	1		4	52		
".....	57	"	"	m	6	2			8	39	13	not answered
".....	34	Poland	Poland	m	1	1			2	52		
".....	60	England	England	m	7	5	3		6	52		
Molder.....	31	U. S.	Ireland	m	4	4	1		5	52		
".....	27	"	"	m	1	1			2	52		
".....	45	Germany	Germany	m	4	4	4		5	52		
Core maker.....	41	U. S.	U. S.	m	2	2	1		3	52		
".....	58	Ireland	Ireland	m	5	5	1		6	52		
Molder.....	36	U. S.	U. S.	m	4	4	2	1	6	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Home.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$3 40	\$369 60	\$15	\$384 60	\$330				\$50	not an							\$500
10 50	535 50		535 50	535					\$8 00					7		500
10 00	440 00		440 00	440					6 50					8		350
9 00	450 00		450 00	450					6 00					8		400
12 00	624 00		624 00	375	\$1,300	\$300	\$200							8	\$23	800
8 40	319 20		319 20	319	1,500	500					\$75	1	\$5 00	7	50	1,300
8 00	384 00		384 00	384					3 00					2 1/2	500	800
8 00	312 00		312 00	360					7 50			1	5 00	7		100
7 50	225 00		225 00	350					5 00			1	4 00	8		400
8 00	416 00		416 00	350	200	150	50				200			7		100
8 00	352 00		352 00	352	600	200								3	600	500
7 50	360 00	\$150	510 00	510					8 00					20	200	250
10 00	520 00		520 00	520					8 00					15	250	60
8 00	416 00		416 00	416					5 00					15	25	300
10 50	546 00		546 00	546					6 00		400			19		200
9 00	408 00	400	808 00	808					10 00					24	200	300
25 00	1,300 00		1,300 00	750	2,000	500	400				1,000	1	25 00	9	350	2,300
7 50	195 00		195 00	285					7 00							200
8 00	272 00		272 00	272					5 00		200	1	5 00	9		250
8 40	67 20		67 20	67					free			1	4 00	1 1/2	50	200
7 25	246 50	400	646 50	646					7 00		1,000			11		300
7 50	390 00		390 00	390					8 00			1	15 00			250
7 50	390 00		390 00	390					8 00				1 5 00	8		250
9 50	494 00		494 00	494					6 50		762	1	5 00	7		400
7 00	288 00		288 00	288					4 00					1 1/2		50
13 00	624 00		624 00	624	1,100	600						1	15 00	8 1/2	150	800
15 00	720 00		720 00	720					10 00					9		300
6 00	312 00		312 00	312					7 00		2,000	1	5 00	10		150
7 90	410 80		410 80	410					3 50			1	3 00	10		100
7 50	322 50		322 50	322					5 00					10 m	60	120
15 00	780 00		780 00	780	2,000						2,500	2	8 00			2,400
15 00	120 00		120 00	400					8 00		2,000	1	4 00			100
19 50	1,014 00	155	1,169 00	1,169	3,500	240					3,000	2	9 00			4,000
9 00	499 20		499 20	400	840	300	75				1,000	1	15 00	19		1,400
16 50	856 00	120	976 00	625	5,000			300			3,000	4	39 00			7,000
15 00	780 00	357	1,080 00	800	1,200	200	200				2,000	1	5 00	8	50	1,400
12 00	528 00		528 00	528					5 00			1	5 00	8		250
15 00	780 00		780 00	675	2,000	75					2,000	2	9 00			2,500
8 00	416 00	375	791 00	625	1,000	900	100							16		300
15 00	780 00	550	1,330 00	900	2,200	300	250				2,000	2	9 00	22	350	2,100
15 00	780 00		780 00	740				20	8 00		2,000	2	9 00			300
7 50	255 00		255 00	255					3 00					2		200
7 90	237 00	200	437 00	500					6 00		180			6		150
7 50	390 00		390 00	390	800	400						1	5 00	8		600
10 50	409 50	100	509 50	509	1,200							1	5 00	19		1,600
7 50	390 00		390 00	390					3 50					3		100
7 50	390 00	250	640 00	640					10 00					6		208
15 00	780 00	120	900 00	450	1,600	800	400				2,000	1	4 00			2,000
15 00	780 00		780 00	730				50	9 00		150	1	4 00			608
24 00	1,248 00		1,248 00	1,248	1,500						3,000	1	15 00	43		1,680
15 00	780 00		780 00	788					11 00		3,000	1	15 00			650
9 00	408 00	624	1,092 00	1,092	1,500						2,000			39		2,500
14 40	748 80		748 80	748					8 50		200	2	10 00			300

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Laborer	39	Poland	Poland	m	5	5	3		6	52		
Molder	43	Canada	France	m	6	6	4		7	52		
"	47	U. S.	Germany	m	4	3	3		4	52		
"	26	"	"	m	1				1	52		
"	38	"	Ireland	m	3	3	3		4	52		
"	27	"	Canada	m	2	2			3	52		
"	36	Canada	Ireland	m	2	2	1		3	52		
"	26	Germany	Germany	m	1	1			2	52		
"	35	"	"	m	4	4	2		5	52		
"	33	U. S.	Ireland	m	1	1			2	52		
"	33	Germany	Germany	m	1	1			2	51	1	no work
"	29	"	"	m					1	39	13	"
"	34	Canada	Canada	m	1	1		1	3	48	4	"
Blacksmith	24	Belgium	Belgium	m	1	1			2	52		
Pattern maker	50	U. S.	Ireland	m	1	1	1		2	46	6	sickness
"	31	"	Germany	m	2	2	1		3	52		
"	56	Germany	"	m	8	3			4	44	8	no work
"	33	U. S.	Ireland	m					1	52		
Carpenter	39	Germany	Germany	m	5	5	2		6	52		
Foreman	39	France	France	m	2	2			3	52		
Blacksmith	32	Poland	Poland	m	1	1			2	52		
Helper	30	Germany	Germany	m					1	34	18	no work
Blacksmith	46	U. S.	Ireland	m	2	2		1	2	26	26	accident & no work
"	53	Germany	Germany	m	8	8	3		9	8	44	no work
"	51	"	"	m	2	1	1		2	26	26	"
Helper	31	"	"	m	3	2			3	44	8	"
Machinist	25	England	England	m	2	2			3	56	6	accident
Laborer	33	Ireland	Ireland	m	2	2			3	48	4	no work
Machine hand	25	U. S.	U. S.	m	1	1			2	52		
Laborer	63	England	England	m	4	2	1		3	51	1	no work
Machine hand	31	Ireland	Ireland	m	1	1		1	3	52		
Watchman	23	Germany	Germany	m	2	2		1	4	52		
Marine engineer	24	England	England	m	1				1	34	18	no work
Laborer	30	Germany	Germany	m	1	1			2	39	13	"
Machine hand	31	Canada	Scotland	m	4	4			5	6		first work in U. S.
Machinist	50	Ireland	Ireland	m	7	3	2		4	34	18	no work
Helper	40	Germany	Germany	m	4	4	2		5	50	2	sickness
Blacksmith	30	Canada	Scotland	m	1	1			2	52		
Laborer	33	Germany	Germany	m	2	2			3	52		
Helper	26	Canada	Canada	m	1	1			2	26		first work in U. S.
Laborer	45	Poland	Poland	m	5	4			5	52		
Carpenter	30	Germany	Germany	m	2	2			3	39	13	no work
Machinist	33	Canada	Ireland	m	3	3	1		4	52		
Machine hand	24	England	England	m	1	1			2	16		first work in U. S.
Laborer	35	Poland	Poland	m	2	2			3	39	13	no work
"	37	"	"	m	2	2			3	39	13	"
"	24	Germany	Germany	m	1	1			2	52		
"	38	Poland	Poland	m	5	5	2		6	45	4	no work
"	25	Germany	Germany	m	1	1			2	52		
Machinist	48	U. S.	U. S.	m	1	1			2	44	8	no work
Laborer	49	Germany	Germany	m	7	5			6	52		
"	45	Poland	Poland	m	6	6	2		7	52		
"	29	U. S.	Bohemia	m	2	2			3	44	8	no work
"	42	Ireland	Ireland	m	1				1	49	3	"
"	55	Germany	Germany	m	4	4	1		5	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.	Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.		If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$390 00		\$390 00	\$300	\$800	\$300	\$75		\$10 00		\$150	1	15	\$10	\$700
14 60	759 20		759 20	759					12 00		3,150	2	20		200
15 00	790 00		790 00	700				\$50	10 00		250	1			400
15 00	790 00		790 00	700					10 00		150	1			500
14 50	754 00		754 00	754								1			500
14 50	754 00		754 00	674			80		7 50		150	1	4 00		150
14 40	748 80		748 80	748					12 00		150	1	4 00	26	800
14 40	748 80		748 80	748					6 00		150	1	4 00	10	300
14 40	748 80		748 80	748	1,800						2,000	1	5 00	19	2,500
15 00	780 00		780 00	780	2,000						2,000	2	14 00		2,500
15 00	765 00	\$130	895 00	800				50	5 00		2,000	2	10 00	10	228 800
15 00	582 00		585 00	585					5 00					26	200
14 40	691 20		691 00	691					6 00			1	5 00	24	300
10 50	546 00		546 00	546					6 50					23	350
15 00	690 00		690 00	690					12 00		2,000	1	5 00		1,000
15 00	780 00		780 00	600	2,500			100			2,000	1	15 00		3,000
12 00	528 00	350	878 00	878	1,200						150	1	5 00	8	400 1,400
20 00	1,040 00		1,040 00	500					14 00			1	10 00		3,500
12 00	624 00		624 00	550	790	300	50				600	2	20 00	25	800
16 50	858 00		858 00	858					11 00			1	4 00	35	550
10 50	546 00	100	646 00	325	700	300	300							7	300 600
7 50	255 00		255 00	255					4 00		200			13	100
12 00	312 00		312 00	312	3,000						2,000				3,500
12 00	96 00	400	496 00	496	1,100	150								20	100 1,200
12 00	312 00	72	384 00	384					7 00					43	150
8 10	356 40		356 40	356					2 50					1	200
13 50	621 00		621 00	571				50	8 00			1	3 00	3	150 250
8 10	388 80		388 80	388					6 00					6	500 150
9 00	468 00		468 00	468					6 00						300
6 60	336 60		336 60	336					9 00					11	20 125
10 50	546 00		546 00	500					40	free				8	120 300
11 54	600 08		600 08	600					9 00					19	300
20 25	698 50		698 50	698					6 00					14	150
7 50	292 50		292 50	292					3 00			1	3 00	12	20 100
10 50	63 00		63 00	63					6 00					2 m	200 250
9 00	306 00		306 00	306	2,000									47	2,600
8 10	405 00		405 00	405					4 00					8	20 300
15 00	780 00	100	880 00	750			100		12 00		3,000	1	5 00	17	3,000
8 10	421 20		421 20	421					3 50		250	1	3 00	9	75 1,000
9 00	234 00		234 00							\$8 50				½	100
7 50	390 00	300	690 00	690	1,400									10	1,900
9 00	351 00		351 00	351					4 50					3	200 200
13 50	702 00		702 00	600			100		10 00			1	4 00	6	100 50
9 50	152 00		152 00	152					8 00			1	5 00	½	50 20
7 50	292 50		292 50	292					3 00					1	147 50
7 50	292 50		292 50	292					3 50					5	800 100
7 50	390 00		390 00	390					3 50					5	200
7 50	380 00		380 00	380					no ans			1	4 00	9	300
7 50	390 00		390 00	390					4 00			1	5 00	7	200
13 50	594 00		594 00	594					12 00						1,000
7 50	390 00	100	490 00	490	1,300						1,000			30	50 1,800
7 50	390 00	250	640 00	640	1,300							1	4 00	20	50 1,500
9 00	396 00		396 00	396					8 00						200
8 10	396 90		396 90	396					6 50					23	300
8 40	436 00	400	836 00	836	1,350							1	4 50	35	800 1,500

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machine hand.	20	U. S.	Ireland.	s						52		
Machinist.	33	Canada.	Scotland.	s				12	12	52		
Pattern maker.	28	U. S.	Germany.	s						48	4	no work
Laborer.	21	Canada.	Scotland.	s						34	18	"
Machinist.	18	U. S.	Ireland.	s						24		first work
Machine hand.	23	"	England.	s						52		
Machinist.	21	Germany.	Germany.	s						39	13	no work
"	22	Canada.	Canada.	s			1	1	1	52		
"	24	England.	England.	s						17		first work in U. S.
"	24	U. S.	Ireland.	s						32	20	no work
"	21	"	U. S.	s						52		
Laborer.	24	"	England.	s						51	1	no work
Molder.	30	"	Ireland.	s						52		
Laborer.	27	"	Germany.	s						26	26	no work
Molder.	34	Canada.	Ireland.	s			1	1	1	44	8	laid off
Laborer.	38	England.	"	m	1	1	1		2	53		
"	32	Germany.	Germany.	m	2	2			3	52		
"	47	Poland.	Poland.	m	6	6	1		7	48	4	sickness
"	47	Germany.	Germany.	m	7	6	3		7	48	4	no work
Machinist.	30	U. S.	U. S.	m	1	1			2	52		
"	36	Germany.	Germany.	m	3	3	2		4	52		
Laborer.	40	U. S.	Ireland.	m	2	2	3		3	49	3	no work
Carpenter.	36	"	Germany.	m	3	3	1		4	52		
Foreman.	27	Canada.	Scotland.	m	1	1			2	52		
Machinist.	44	U. S.	U. S.	m	3	3	2		4	48	4	accident
"	25	"	"	m	3	3			4	39	13	no work
"	58	France.	France.	m					1	52		
"	25	U. S.	U. S.	m					1	34	18	no work
"	24	Canada.	England.	m				1	2	52		
Laborer.	35	Germany.	Germany.	m	3	3	1		4	52		
"	24	"	"	m	2	2		2	5	39	13	no work
"	45	U. S.	England.	m	5	5	1		6	52		
Machinist.	46	"	U. S.	m	7	5	4		6	52		
Carpenter.	48	Scotland.	Scotland.	m	4	4			5	39	13	no work
"	46	Germany.	Germany.	m	1	4	1		5	48	4	"
"	48	"	"	m	4	3	1	1	5	46	6	"
Machine hand.	30	"	"	m	2	3			3	52		
Laborer.	34	Canada.	Scotland.	m	4	4	1		5	52		
Helper.	35	Germany.	Germany.	m	4	4	1		5	46	6	no work
Helper.	46	"	"	m	4	4	1		5	52		
Laborer.	38	Poland.	Poland.	m	3	3	2		4	52		
"	22	U. S.	Russia.	m	1	1			2	20	25	no work
Machinist.	26	Germany.	Germany.	m					1	42	10	"
"	32	U. S.	Canada.	m					1	39	13	"
"	47	England.	England.	m					1	39		first work in U. S.
Cupola tender.	50	Germany.	Germany.	w'r	1					52		
Molder.	32	U. S.	U. S.	w'r	1	1		1	2	52		
Millwright.	33	"	"	w'r	3	3	3		3	34	18	no work
Laborer.	25	France.	France.	s				5	5	49	4	"
"	24	U. S.	U. S.	s					1	52		
Machinist.	29	Canada.	"	s				2	2	52		
"	23	"	Germany.	s						44	8	no work
"	23	U. S.	Canada.	s						44	8	"
Laborer.	21	"	Germany.	s						52		
"	19	"	Canada.	s				1	1	39	13	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$483 00		\$483 00							\$2 50						\$100
12 00	624 00		624 00					\$100		4 25				1	\$20	125
15 00	720 00		720 00					50		4 00						300
9 00	306 00		306 00					*		*				2		75
7 50	180 00		180 00					*		*						150
10 50	546 00		546 00					100		4 00						300
10 50	409 50		409 50							3 50				8		250
15 00	780 00		780 00							4 00				7		100
10 50	178 50		178 50							5 00	\$1,000	1	\$4 00	3	10	200
13 50	432 00		432 00							5 00						200
13 50	702 00		702 00							5 20						30
7 50	382 50		382 50							3 50						150
15 00	780 00		780 00							4 50		1	4 00			650
7 50	195 00		195 00							3 50						100
15 00	680 00		680 00							4 00	150	1	4 00	12		200
9 00	468 02		468 00	\$468					free					33		300
8 40	436 80		436 80	310	\$1,000	\$300	\$100				100	1	3 00	7	20	1,000
9 00	432 00	\$400	832 00	832	1,000							1	4 00	22	100	1,500
7 50	360 00	200	560 00	475	3,000	700	50				1,000	1	5 00	18		2,500
12 75	715 00		715 00	815				400	\$5 00		1,000					900
12 00	624 00		624 00	550	800	300	50							25		800
7 50	367 50		367 50	367	1,000	850										1,000
12 00	624 00		624 00	624												300
20 00	1040 00		1,040 00	900				100	12 00		2,000	1	5 00	7		600
13 50	648 00		648 00	648	1,800											2,300
18 50	526 50		526 50	526					8 00		2,000	1	4 00			75
15 00	780 00		780 00	780					10 00					20	300	100
13 50	459 00		459 00	459					10 00							300
15 00	780 00		780 00	780					10 00			2	10 00	4		400
7 50	390 00		390 00	390					4 00					20		300
9 00	351 00		351 00	351					3 00					6		250
9 00	468 00	150	618 00	618					10 00			1	4 00			200
18 00	936 00		936 00	936					12 00							500
12 00	468 00	450	918 00	918					10 00					2	275	300
12 00	576 00		576 00	525	800	200	30					1	5 00	10	300	300
10 50	483 00	300	783 00	783	1,500							1	5 00	10	400	1,700
9 00	468 00		468 00	368				100	7 00			1	5 00	8	100	600
10 00	520 00		520 00	520					6 00					1 1/2	50	1,500
8 10	372 60		372 60	320				50	4 00			1	4 00	10		200
7 80	405 80		405 80	350	700	200		50				1	3 00	8		700
7 50	390 00		390 00	390					6 00			1	5 00	10	25	350
7 50	195 00		195 00							6 00						200
12 00	504 00		504 00					200		8 50	3,000	1	10 00	19		300
15 00	585 00		585 00							8 00						200
13 00	468 00		468 00							4 00	500			3		300
15 00	780 00		780 00	780	1,250							1	5 00	24	10	1,530
15 00	780 00		780 00	780	1,500	650					2,150	2	14 00			1,400
15 00	510 00		510 00							\$ 50	2,000					2,500
9 00	432 00		432 00	432										7	300	25
9 00	468 00		468 00	468												50
12 00	624 00		624 00	530					15 00					5 1/2	300	900
13 50	594 00		594 00					200		*				23		15
13 50	594 00		594 00							3 50						500
7 50	390 00		390 00							3 50	300					40
7 50	292 50		292 50							3 50						100

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	22	Poland	Poland	s						44	8	sickness
Core maker	22	Germany	Germany	s						52		
"	22	Canada	Ireland	s						24	28	no work
Laborer	28	U. S.	England	s						26	26	
Core maker	15	"	U. S.	s						39		first work
"	15	"	Poland	s						52		
"	18	"	Germany	s						52		
Molder	17	"	Ireland	s						52		
Core maker	21	Canada	"	s						39	13	no work
"	15	Switz.	Switz.	s						52		
"	17	England	England	s						2		first work in U. S.
Molder	18	France	France	s						26	26	no work
"	25	Canada	England	s				1	1	52		
"	21	U. S.	Ireland	s				2	2	51	1	no work
"	30	Germany	Germany	s				2	2	39	18	
Machine hand	20	U. S.	U. S.	s						34	18	laid off
Laborer	19	"	"	s						44	8	no work
Pattern maker	30	"	England	s						52		
Machinist	29	"	Ireland	s						46	6	no work
Blacksmith	35	"	"	s						44	8	
Foreman	35	"	U. S.	s				1	1	52		
Laborer	28	"	Scotland	s						52		
Helper	28	"	U. S.	s						49		no work
Blacksmith	35	"	Ireland	s						52	4	
Machinist	26	Scotland	Scotland	s						52		
Helper	33	Canada	"	s						4		first work in U. S.
Laborer	21	Germany	Germany	s						44	8	no work
"	27	"	"	s				2	2	26	26	
Blacksmith	25	U. S.	Scotland	s						52		
Foreman	31	"	Ireland	s						52		
Laborer	23	Canada	Canada	s						4		first work in U. S.
Machinist	45	"	"	s						52		
"	27	Germany	Germany	s						44	8	no work
"	25	U. S.	U. S.	s				2	2	34	18	sick and no work
MICHIGAN BOLT AND NUT WORKS.												
Laborer	14	Germany	Germany	s						39	13	no work
Machine hand	17	U. S.	Ireland	s						48	4	"
"	16	Germany	Germany	s						52		
"	16	U. S.	"	s						49	4	no work
"	18	Holland	Holland	s						43	9	"
"	19	U. S.	Poland	s						44	8	"
"	19	"	Switz.	s						17	35	sickness
"	17	"	Germany	s						44	8	sick and no work
"	17	"	Ireland	s						39	13	no work
"	15	"	Germany	s						52		
"	17	"	Poland	s						52		
"	17	Germany	Germany	s						44	8	sickness
"	17	"	"	s						52		
Laborer	15	"	"	s						26	26	not ana.
Machine hand	16	"	"	s						52		
"	17	"	"	s						52		
Laborer	14	U. S.	U. S.	s						52		
Machine hand	17	Germany	Germany	s						38	14	no work
Laborer	17	"	"	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning a home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$396 00		\$396 00					\$100		\$3 00	\$600	1	\$3 00	11		\$20
8 40	436 80		436 80					*						3		23
8 10	194 40		194 40					*		3 50				2	\$40	50
7 00	182 00		182 00					*		*						15
3 00	117 00		117 00					*		*						
4 50	234 00		234 00					*		*						
7 50	390 00		390 00					*		*						
4 50	234 00		234 00					*		*						
9 00	351 00		351 00					*		*				20		50
3 00	156 00		156 00					*		*				6		
9 00	18 00		18 00					*		3 00				1½	5	
3 00	78 00		78 00					*		*						
15 00	780 00		780 00					100		3 50	1,000	2	9 00	2		250
12 00	612 00		612 00							7 00						20
15 00	585 00		585 00					20		4 00	150	1	4 00	9	40	400
3 00	102 00		102 00					*		*						50
7 50	390 00		390 00					*		3 00						50
6 00	312 00		312 00					*		*		1	5 00			150
13 50	621 00	\$10	631 00					*		4 50						350
10 00	440 00		440 00					250		3 50						300
19 50	1,014 00		1,014 00							8 00		1	5 00			400
10 00	520 00		520 00					100		3 50						125
8 10	388 80		388 80							3 50						800
13 50	702 00	500	1,202 00					300		4 00	2,000	1	5 00			2,500
13 25	689 00		689 00					Ref'd.		3 50	2,000	1	5 00	8		Ref'd.
8 10	32 40		32 40					*		3 50		1	4 00	1 mo	2	15
7 50	380 00		380 00					*		*				10		50
7 50	195 00		195 00							3 00		1	3 00	5	50	200
12 00	624 00		624 00					200		4 00						1,000
16 50	858 00		858 00					800		6 00						1,400
8 10	32 40		32 40							4 00				1 mo	23	50
13 50	702 00		702 00					50		3 50				5	50	500
13 50	594 00		594 00							3 50				1½	14	20
3 50	459 00		459 00							4 00						200
3 00	117 00		117 00					*		*				5		
3 50	168 00		168 00					*		*						
3 00	156 00		156 00					*		*				3		
3 80	172 80		172 80					*		*						
4 80	206 40		206 40					*		*				2½		
5 20	228 80		228 80					*		*						25
4 80	81 60		81 60					*		*	2,000					30
4 20	184 80		184 80					*		*						
3 80	140 40		140 40					*		*						
3 25	205 40		205 40					*		*						
3 00	156 00		156 00					*		*						
4 20	184 80		184 80					*		*				5		
4 50	234 00		234 00					*		*				12		125
3 00	78 00		78 00					*		*				5		
3 00	156 00		156 00					*		*						
4 80	249 60		249 60					*		*				9		
3 00	156 00		156 00					*		*						
4 50	171 00		171 00					*		*				12		
3 00	156 00		156 00					*		*				6		

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	15	U. S.	Germany	s						52		
Machine hand	16	Germany	"	s						39	13	no work
"	15	"	"	s						52		
"	15	U. S.	"	s						39	13	no work
Machinist	19	U. S.	U. S.	s						52		
"	17	"	France	s						52		
Machine hand	18	Germany	Germany	s						52		
"	17	U. S.	"	s						52		
"	15	"	U. S.	s						52		
"	16	"	"	s						44	8	no work
"	17	Germany	Germany	s						89	13	"
Laborer	18	"	"	s						52		
Machine hand	16	"	"	s						52		
"	15	U. S.	France	s						52		
"	15	"	Germany	s						52		
Laborer	17	"	"	s						52		
"	16	Germany	"	s						49		first work in U. S.
"	18	U. S.	"	s						52		
"	17	Germany	"	s						52		
Machine hand	16	"	"	s						43	9	no work
"	18	Canada	Canada	s						52		
"	17	U. S.	Germany	s						48	4	no work
"	20	Germany	"	s						52		
Laborer	16	U. S.	"	s						53		
"	18	"	"	s						52		
"	17	Belgium	Belgium	s						52		
"	15	U. S.	Germany	s						52		
"	15	Germany	"	s						52		
"	16	"	"	s						26	26	no work
"	15	U. S.	"	s						52		
"	15	Belgium	Belgium	s						52		
"	14	U. S.	France	s						52		
"	14	"	Germany	s						52		
Machine hand	16	"	Canada	s						52		
"	19	"	Germany	s						52		
"	15	"	"	s						52		
"	16	"	"	s						52		
"	14	"	"	s						50	2	no work
"	14	"	"	s						52		
"	18	Poland	Poland	s						52		
Laborer	16	Germany	Germany	s						52		
Nut maker	21	"	"	s						52		
Machine hand	23	Canada	Canada	s				1	1	49	3	sickness
Machinist	23	Belgium	Belgium	s				2	2	52		
Machine hand	21	U. S.	U. S.	s				2	2	53		
Laborer	20	"	Germany	s				3	3	39	13	no work
Rivet maker	22	Germany	"	s						52		
Shipping clerk	22	England	England	s						52		
Machine hand	25	U. S.	Germany	s				1	1	52		
"	25	"	"	s						26	26	no work
"	22	Germany	"	s						50	2	"
Laborer	25	"	"	s						44	8	"
Machine hand	18	U. S.	Ireland	s						49	3	"
"	19	Germany	"	s						53		
"	23	"	"	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$3 00	\$156 00	.....	\$156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	117 00	.....	117 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	117 00	.....	117 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
9 00	468 00	.....	468 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	\$50
4 50	234 00	.....	234 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 50	249 60	.....	249 60	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
6 00	312 00	.....	312 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 60	187 20	.....	187 20	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 50	198 00	.....	198 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 80	187 20	.....	187 20	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
6 00	312 00	.....	312 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 80	249 60	.....	249 60	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 20	218 40	.....	218 40	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 80	206 40	.....	206 40	.....	.....	.....	.....	*	.....	*	.....	.....	10 mo	.....	.....
4 50	234 00	.....	234 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 80	249 60	.....	249 60	.....	.....	.....	.....	*	.....	*	.....	.....	6	.....	.....
4 20	180 60	.....	180 60	.....	.....	.....	.....	*	.....	*	.....	1	\$3 00	6	.....
5 25	273 00	.....	273 00	.....	.....	.....	.....	*	.....	*	.....	.....	2½	.....	.....
4 50	230 40	.....	230 40	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
7 50	360 00	.....	360 00	.....	.....	.....	.....	*	.....	*	.....	.....	10	.....	25
3 60	187 20	.....	187 20	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 60	187 20	.....	187 20	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 60	187 20	.....	187 20	.....	.....	.....	.....	*	.....	*	.....	.....	6	.....	.....
3 30	171 60	.....	171 60	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	8	.....	.....
3 00	78 00	.....	78 00	.....	.....	.....	.....	*	.....	*	.....	.....	10	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 30	171 60	.....	171 60	.....	.....	.....	.....	*	.....	*	.....	.....	6	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
4 20	218 40	.....	218 40	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
6 00	312 00	.....	312 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	30
3 60	187 20	.....	187 20	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 90	202 80	.....	202 80	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 60	190 00	.....	180 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
3 00	156 00	.....	156 00	.....	.....	.....	.....	*	.....	*	.....	.....	10	.....	.....
7 80	405 60	.....	405 60	.....	.....	.....	.....	*	.....	*	.....	.....	18	.....	.....
4 80	249 60	.....	249 60	.....	.....	.....	.....	*	.....	*	.....	.....	2	.....	.....
9 00	468 00	.....	468 00	.....	.....	.....	.....	*	.....	*	.....	.....	12	.....	150
6 00	294 00	.....	294 00	\$294	.....	.....	.....	*	.....	*	.....	.....	19	.....	100
5 25	273 00	.....	273 00	273	.....	.....	.....	*	.....	*	.....	.....	9	.....	15
6 00	312 00	.....	312 00	312	.....	.....	.....	*	.....	*	.....	.....	.....	.....	100
6 00	234 00	.....	234 00	234	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
9 75	507 00	.....	507 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
12 00	624 00	.....	624 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
9 00	468 00	.....	468 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
7 50	195 00	.....	195 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
7 50	375 00	.....	375 00	.....	.....	.....	.....	*	.....	*	.....	.....	.....	.....	.....
7 50	330 00	.....	330 00	.....	.....	.....	.....	\$25	.....	3 50	.....	1	5 00	6	50
6 00	294 00	.....	294 00	.....	.....	.....	.....	.....	.....	3 00	.....	.....	.....	.....	150
7 50	390 00	.....	390 00	.....	.....	.....	.....	.....	.....	3 00	.....	.....	.....	.....	.....
6 00	312 00	.....	312 00	.....	.....	.....	.....	75	.....	2 50	.....	.....	10	.....	35
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	25	100

* Gives wages to parents and lives at home.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machine hand	23	Holland	Holland	s	—	—	—	—	—	52	—	
"	17	Germany	Germany	s	—	—	—	—	—	35	17	no work
"	22	"	"	s	—	—	—	—	—	51	1	
"	19	U. S.	France	s	—	—	—	2	2	52	—	
"	13	"	Ireland	s	—	—	—	—	—	51	1	no work
"	16	"	Germany	s	—	—	—	—	—	52	—	
Laborer	18	"	Poland	s	—	—	—	—	—	44	8	no work
Machinist	40	Canada	Ireland	s	—	—	—	1	1	52	—	
Blacksmith helper	25	Germany	Germany	s	—	—	—	1	1	41	8	no work
Blacksmith	32	"	"	s	—	—	—	1	1	52	—	
Blacksmith helper	30	"	"	s	—	—	—	—	—	22	30	sickness
Laborer	28	"	"	s	—	—	—	—	—	39	13	no work
Machinist	21	U. S.	England	s	—	—	—	—	—	44	8	
Laborer	27	Germany	Germany	s	—	—	—	—	—	46	6	"
Machinist	28	Canada	Canada	s	—	—	—	—	—	52	—	
Machine hand	18	U. S.	Germany	s	—	—	—	—	—	52	—	
"	25	"	France	s	—	—	—	—	—	48	4	no work
Nut maker	21	Germany	Germany	s	—	—	—	—	—	49	3	
Laborer	21	U. S.	U. S.	s	—	—	—	—	—	32	20	"
"	24	Belgium	Belgium	s	—	—	—	—	—	35	17	"
"	21	Germany	Germany	s	—	—	—	—	—	46	6	"
Machine hand	18	W. Indies	W. Indies	s	—	—	—	—	—	39	13	
Laborer	23	Germany	Germany	s	—	—	—	—	—	52	—	
Machine hand	18	U. S.	"	s	—	—	—	—	—	49	3	no work
Laborer	18	Canada	U. S.	s	—	—	—	—	—	52	—	
Packer	19	U. S.	Canada	s	—	—	—	—	—	52	—	
Machine hand	18	"	Germany	s	—	—	—	—	—	52	—	
Laborer	48	Germany	"	m	1	1	—	—	2	44	8	no work
Foreman	36	U. S.	"	m	—	—	—	—	—	52	—	
Nut maker	27	Canada	Canada	m	4	4	1	—	5	35	17	no work
Bolt header	43	Germany	Germany	m	5	4	2	—	5	52	—	
Yard master	33	"	"	m	4	4	2	—	5	50	2	sickness
Laborer	45	France	France	m	6	6	3	—	7	48	4	no work
"	45	Germany	Germany	m	6	6	2	—	7	52	—	
"	30	"	"	m	3	3	—	—	4	46	6	no work
Machinist	63	Canada	Canada	m	7	2	1	—	3	52	—	
"	80	"	"	m	1	1	—	—	2	44	8	no work
Laborer	35	Germany	Germany	m	4	4	3	—	5	39	13	"
"	32	"	"	m	1	1	—	—	2	52	—	
"	37	"	"	m	5	5	1	—	6	52	—	
Nut maker	49	Ireland	Ireland	m	4	2	—	—	3	52	—	
Laborer	28	Germany	Germany	m	1	1	—	—	2	52	—	
Nut maker	35	U. S.	U. S.	m	4	4	3	—	5	26	26	no work
"	24	Germany	Germany	m	1	1	—	—	2	52	—	
Laborer	50	Ireland	Ireland	m	—	—	—	—	1	52	—	
Nut maker	28	Germany	Germany	m	3	3	—	1	5	52	—	
Laborer	36	"	"	m	5	5	3	—	6	49	3	no work
"	35	Belgium	Belgium	m	4	4	2	—	5	50	2	
"	32	U. S.	Germany	m	5	5	2	1	7	32	—	
Engineer	42	Germany	"	m	3	3	3	—	4	52	—	
Carpenter	33	Canada	Canada	m	1	1	1	—	2	52	—	
Nut maker	40	Germany	Germany	m	3	3	1	—	4	48	4	no work
"	32	"	"	m	—	—	—	—	1	52	—	
"	23	"	"	m	—	—	—	—	1	49	3	no work
"	26	"	"	m	2	2	—	—	3	47	5	

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
88 00	\$312 00		\$312 00							\$3 50				6 1/2		\$15
88 00	175 00		175 00							3 50				2 1/2		20
88 00	308 00		308 00							3 00						
88 00	312 00		312 00							4 00	\$2,000					
88 00	188 60		188 60							3 60						
8 80	187 20		187 20							1 50						
8 00	264 00		264 00							4 50						
13 50	702 00		702 00	\$800	\$2,000			\$100		3 00	200	1	\$3 00	30		2,800
8 25	308 00		308 00					50		3 50				10		200
9 00	468 00		468 00							3 50				2		80
7 50	165 00		165 00							3 50						
7 50	292 50		292 50							3 50				6 1/2		25
13 50	594 00		594 00							3 50				7		100
7 50	345 00		345 00							3 50		1	5 00			100
13 00	676 00		676 00					100		3 50				5		150
										4 00				5		150
4 50	234 00		234 00							2 50						
6 00	288 00		288 00					25		4 00						100
9 50	465 50		465 50							4 00						250
7 50	240 00		240 00							3 50						50
7 50	262 50		262 50							3 00						75
7 50	345 00		345 00					75		3 25				9		125
5 00	195 00		195 00							3 00				2		
7 50	390 00		390 00					50		3 50				20		125
5 00	245 00		245 00							3 00						
4 50	234 00		234 00							3 00				15		
6 75	351 00		351 00							3 50	100					40
4 80	249 60		249 60							2 50						
7 50	330 00		330 00	330					\$4 50							
13 60	702 00		702 00	375	1,800			800		4 00						
9 50	332 50		332 50	332							3,000	2	10 00	12		400
														9		2,800
9 00	468 00	\$150	618 00	440	1,000	\$300	\$150							18		1,200
9 25	462 50		462 50	462	1,100	475					2,000	1	10 00	9	\$150	900
8 25	396 00		396 00	396	800	800								16	25	700
7 50	390 00	125	515 00	340	1,800	400	100				2,000	1	5 00	20	5	1,200
7 50	345 00		345 00	345					8 00		1,500			20		350
16 50	858 00		858 00	858	2,000									43		2,500
12 00	528 00		528 00	528					6 00					10	50	350
7 50	292 50		292 50	292	1,000	850					1,000			15	10	900
9 75	507 00		507 00	507	900	400						1	4 00	10		800
7 50	390 00		390 00	390					4 50				1	5 00	10	200
9 75	507 00	200	707 00	707	1,200	100						1	4 00	49		2,000
7 50	390 00		390 00	390					4 50					6		200
9 75	253 50	20	273 50	273					7 00							600
9 00	468 00		468 00	340	1,900	400	100									1,100
7 50	390 00		390 00	320	1,000			50			2,000	1	5 00	9		2,000
9 75	507 00		507 00	507	1,000	500						1	5 00	6		1,000
7 50	367 50		367 50	280	1,100	500	50							14	50	800
7 50	375 00		375 00	375					6 00					10	30	300
7 50	390 00		390 00	390	1,000	300					2,000	1	10 00			700
15 00	780 00		780 00	650	1,600			100			2,000	2	15 00	18	100	2,200
10 50	546 00		546 00	360	4,000	600	100	45						9		4,000
10 50	504 00		504 00	504	1,000									20		1,100
9 75	507 00		507 00	507	1,000	600						1	3 00	9	40	500
9 75	477 75		477 75	477					5 00		250	1	5 00	6		150
9 00	423 00		423 00	325	1,350	650	40				250	1	5 00	18		1,000

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist.....	26	Scotland..	Scotland..	m	1	1			1	39	13	sickness
".....	38	Switz.....	Switz.....	m	3	3	3		3	52		
".....	28	England....	England....	m	3	3			4	52		
Laborer.....	42	Canada....	Canada....	m	1	1			2	52		
Machinist.....	29	U. S.....	Ireland....	m	1	1			2	52		
Foreman.....	41	Germany....	Germany....	m	1	1			2	52		
Laborer.....	37	".....	".....	m	5	5	3		6	39	13	no work
Nut maker.....	31	".....	".....	m	5	5	3		5	52		
Laborer.....	42	".....	".....	m	2	2			3	42	10	no work
".....	28	".....	".....	m	3	3	1	1	5	35	17	"
Bolt header.....	32	".....	".....	m	2	2			4	46	6	"
Bolt header.....	37	U. S.....	".....	m	4	4		1	5	52		
Laborer.....	49	Germany....	".....	m	6	4	2		5	52		
Foreman.....	35	U. S.....	".....	m	3	3	3		4	52		
Machine hand.....	24	Germany....	".....	m	1	1			2	44	8	no work
".....	22	".....	".....	m	1	1			2	52		
Foreman.....	30	Holland....	Holland....	m	2	2			3	49	4	not ana.
Laborer.....	36	Germany....	Germany....	m	6	6	4		7	52		
Machine hand.....	24	".....	".....	m	1	1			2	50	2	no work
Machinist.....	49	".....	".....	m	5				1	52		
".....	57	".....	".....	m	4				1	52		
Machine hand.....	53	Canada....	Canada....	m	6	3	2		4	52		
Machinist.....	24	U. S.....	Germany....	m	2	2			3	52		
".....	39	Germany....	".....	m	3	3	3		4	52		
Blacksmith.....	35	".....	".....	m	6	6	4		7	52		
Laborer.....	35	Belgium....	Belgium....	m	3	3	1		4	48	4	no work
Blacksmith helper.....	38	Germany....	Germany....	m	1	1			2	52		
Machine hand.....	35	Canada....	".....	m	1	1			1	52		
".....	22	Germany....	Germany....	m	1	1			2	26	26	no work
Foreman.....	37	Canada....	".....	m	4	4	3		5	52		
Machinist.....	30	Germany....	Germany....	m			1		2	52		
Blacksmith.....	40	".....	".....	m	5	5	1		6	35	17	no work
".....	27	".....	".....	m	2	2		2	5	39	13	"
".....	26	".....	".....	m	1	1			2	52		
".....	37	".....	".....	m	3	3	1		4	52		
Blacksmith helper.....	23	".....	".....	m	1	1			2	44	8	no work
MICHIGAN RADIATOR AND IRON MFG. CO.												
Core maker.....	29	U. S.....	Germany....	m		9			1	44	8	no work
Carpenter.....	45	Germany....	".....	m	9	4	3		10	48	4	"
Teamster.....	35	U. S.....	U. S.....	m	3	3	2		4	52		
Carpenter.....	30	".....	Germany....	m	2	2			3	52		
Laborer.....	30	Poland....	Poland....	m	2	2			3	26	26	no work
".....	35	".....	".....	m					1	39		first work in U. S.
Molder.....	23	U. S.....	France....	m					1	23	29	burnt foot
".....	41	Switz.....	Switz.....	m	2				1	44	8	no work
".....	32	U. S.....	U. S.....	m	3	3	2		4	44	8	no work and sick
".....	28	".....	England....	m	2	2			3	39	13	no work
".....	29	Canada....	Scotland..	m	4	4			5	46	6	"
".....	31	U. S.....	".....	m	1	1			2	44	8	"
".....	25	Germany....	Germany....	m	2	2			3	45	7	"
".....	32	Canada....	Canada....	m	3	3			4	46	6	"
".....	33	U. S.....	Germany....	m	5	5	2		6	39	13	"
".....	37	Canada....	England....	m					1	41	8	shut down
Blacksmith.....	50	Germany....	Germany....	m	4	3	2		4	39	13	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payment on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$526 50		\$526 50	\$526					\$8 00			1	\$3 00	3	\$150	\$400
15 50	558 00	\$180	1,038 00	860	\$2,500	\$800	\$70				\$2,000	1	10 00	37		1,900
18 00	676 00		676 00	676					8 00			1	5 00	4	40	450
7 50	390 00		390 00	390					5 00					26		250
16 50	658 00		658 00	680	300	60	150				1,000	1	5 00			600
18 00	936 00		936 00	775	1,200	600		\$100			3,000	1	15 00	35		900
9 25	360 75		360 75	315	250	125	85							9	150	250
9 50	494 00		494 00	494	800	100						1	19 00			500
7 50	315 00		315 00	315					6 00					16	250	75
7 50	262 50		262 50	262					5 00			1	5 00	1	60	80
9 25	425 50		425 50	425					5 00		75	1	5 00	9		150
9 50	494 00	100	594 00	544				50	Free		250	2	10 00			600
7 50	390 00		390 00	390	1,200	250								10	250	1,260
18 00	936 00		936 00	936	2,200						2,500	1	5 00			2,500
7 00	308 00		308 00	308					4 00					18		125
7 25	377 00		377 00	377					3 00		300			20		250
9 00	432 00		432 00	432					6 00					18		300
10 50	546 00		546 00	546					7 00		2,000	1	10 00	26		300
9 75	487 50		487 50	487					5 00			1	5 00	7		300
15 00	780 00	200	980 00	980	2,500	500						1	5 00	39		2,800
15 00	780 00	100	880 00	880	2,000						2,000	3	20 00	25	500	2,500
7 50	390 00		390 00	390					5 00					40		200
18 50	702 00		702 00	702	1,000	800					2,500	1	10 00			1,200
16 50	858 00	600	1,458 00	858	2,500	600	400	200			2,500			38		4,000
12 00	624 00		624 00	624					7 00					20		800
7 50	360 00		360 00	240	1,300	400	100							7	125	1,100
7 50	390 00		390 00	390					5 00			1	5 00	6	500	500
9 00	468 00		468 00	468					10 00		2,000	1	10 00	11		200
6 00	156 00		156 00	200					3 00					17		50
15 00	780 00		780 00	350	800	300	400				1,000			20		800
18 50	702 00		702 00	702					8 00			1	5 00	20		150
9 00	315 00	100	415 00	415					5 00					11		775
10 50	409 50		409 50	409	600	500						1	5 00	9		500
9 00	468 00		468 00	418				50	3 00					2 1/2	100	500
8 75	458 00		458 00	275	950	400	123				500	2	10 00	10		950
7 50	330 00		330 00	330					3 50					8		200
9 00	396 00		396 00	396					3 50			1	5 00			100
9 00	432 00	200	632 00	510	850	300	96							15	200	950
10 50	546 00		546 00	546					7 00		600					500
12 00	624 00		624 00	624					4 00							100
4 50	117 00	75	192 00	192					3 50					4		50
6 00	234 00		234 00	234					2 50					3		75
15 00	345 00		345 00	345					9 00							400
15 00	690 00		690 00	500	1,500			150				1	7 00	8		1,800
15 00	690 00		690 00	690					6 00		250					600
15 00	585 00		585 00	585					7 00			1	5 00			500
15 00	690 00	80	750 00	550	1,700	1,000	100				2,000	1	5 00	21		1,000
18 00	660 00		660 00	660					9 00		2,000	1	5 00			600
10 00	450 00		450 00	320	900	400	100					1	9 00	10		800
15 00	690 00		690 00	690					8 00			1	5 00	12	25	350
15 00	585 00		585 00	585					7 00							200
8 25	363 00		363 00	363					8 00					3		200
10 70	417 80	84	501 80	501	3,000						2,000			87		3,300

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	30	U. S.	Germany	m	3	3			4	43	10	no work
"	24	Germany	"	m	1	1			1	44	8	sick and no work
"	27	U. S.	Holland	m	1	1	1	1	3	46	6	no work
"	29	Canada	Scotland	m	1	1			1	35	17	burnt and no work
"	26	U. S.	Germany	m	1	1			2	48	4	no work
"	27	Canada	Ireland	m					1	44	8	"
"	32	Germany	Germany	m	5	5	1		6	45	7	"
"	28	"	"	m	1	1			2	45	7	"
"	32	"	"	m	1	1			2	48	4	"
"	34	Canada	Canada	m				1	2	48	4	"
Molder helper.	31	U. S.	Germany	m	1	1		1	3	39	13	hurt
Foreman	34	"	U. S.	m					1	49	3	shut down
Core maker.	23	"	Ireland	m	2	2			3	39	13	no work
Laborer	35	Germany	Germany	m	3	3			4	44	8	"
Core maker.	33	Canada	Ireland	m	1	1		2	4	49	3	"
"	30	U. S.	England	m	1	1			2	39	13	sick and no work
Engineer	38	England	"	m	4	4	1		5	35	17	no work
Laborer	30	Germany	Germany	m	2	2			3	44	8	"
"	38	"	"	m	5	5	3		6	48	4	"
"	39	"	"	m	5	5	2		6	46	6	"
Core maker.	30	U. S.	U. S.	m					1	39	13	"
Laborer	28	Poland	Poland	m	2	2			3	30	3	first work in U. S.
"	36	Germany	Germany	m	1	1			2	49	3	no work
Molder	24	U. S.	"	s	1	1		3	3	35	17	"
"	26	U. S.	"	s				1	1	44	8	"
Laborer	20	Germany	"	s				1	1	39	13	"
Molder	24	"	"	s				1	1	44	8	"
"	20	U. S.	England	s						44	8	"
"	21	Ireland	Ireland	s						44	8	"
"	24	Germany	Germany	s						44	8	"
"	22	U. S.	Ireland	s						26	26	"
"	21	"	U. S.	s			2		2	35	17	"
"	27	"	Germany	s			1		1	46	6	"
"	36	Canada	Canada	s			2		2	47	5	"
Molder helper	18	U. S.	Germany	s						32	20	"
Molder	27	Canada	Ireland	s				1	1	37	15	"
Laborer	18	U. S.	Germany	s						46	6	"
Molder	20	Germany	"	s				6	6	44	8	"
"	25	U. S.	Ireland	s						44	8	"
Laborer	19	"	Germany	s						46	6	"
Foreman	23	"	Ireland	s				4	4	46	6	sickness
Core maker.	18	Germany	Germany	s						30	13	no work
"	18	U. S.	"	s						46	6	"
"	20	Germany	"	s						49	3	"
"	24	England	England	s						44	8	sick and no work
"	20	Germany	Germany	s						48	4	no work
Laborer	32	"	"	s				1	1	48	4	"
"	27	"	"	s						26	26	"
Machine hand	19	U. S.	"	s						35	17	"
Machinist	28	"	"	s						52		
Machine hand	20	"	U. S.	s						52		
Laborer	25	Canada	Canada	s						46	6	no work
"	26	Germany	Germany	s						52		
"	21	"	"	s						46	6	no work
"	18	U. S.	"	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born. No. of years in United States.	If foreign born, amt of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$15 00	\$630 00		\$630 00	\$630					\$16 00		\$2,300	2	\$15 00		\$250
15 00	660 00		660 00	660					6 00						300
15 00	690 00		690 00	690					8 00						200
12 00	420 00		420 00	420					8 00		1,000			1	300
15 00	720 00		720 00	720					6 00			1	5 00		850
16 00	704 00		704 00	600				\$100	12 50						400
15 00	675 00		675 00	375	\$1,500	\$1,400	\$200					1	5 00	4	500
15 00	675 00		675 00	675					free		2,000	1	8 00	24	500
15 00	720 00		720 00	720					4 00			1	5 00	18	500
15 00	720 00		720 00	720					6 00			1	7 00	24	200
7 50	292 50		292 50	292					7 00						150
24 00	1,176 00		1,176 00	1,176					12 00			2	15 00		1,000
12 00	468 00		468 00	388				100	6 00						575
6 50	296 00		296 00	260	400	800					400	1	4 00	8	800
10 00	490 00		490 00	300	1,500	800	127							3	1,000
9 00	351 00		351 00	351					5 50			1	5 00		250
10 00	350 00		350 00	350					5 00			1	2 50	10	100
7 50	380 00		380 00	280				50	6 50					20	400
7 50	380 00		380 00	280	1,500	600	75							15	1,200
7 50	345 00	\$150	495 00	350	1,800	700	100					1	5 00	20	1,900
9 00	351 00		351 00	351					8 50						250
7 50	225 00		225 00	225					4 00					1 1/2	75
10 50	514 50		514 50	514					8 00					1 1/2	500
15 00	525 00		525 00									1	7 00	15	45
15 00	660 00		660 00					25	\$3 50			1	25 00		50
7 50	292 50		292 50						3 50					4	20
12 00	528 00		528 00						3 50			1	5 00	9	50
15 00	660 00		660 00						4 50						200
7 50	330 00		330 00						3 50					1	50
14 00	616 00		616 00					100	4 00			2	8 00	9	400
12 00	312 00		312 00						3 50						50
15 00	525 00		525 00						4 00			1	5 00		100
15 00	690 00		690 00						4 00			1	5 00		100
15 00	705 00		705 00						10 00					22	100
6 00	192 00		192 00						3 50						
15 00	555 00		555 00						5 00			1	5 00	28 1/2	75
4 50	207 00		207 00						2 50						50
15 00	660 00		660 00	660					7 50					10	100
15 00	660 00		660 00						5 00			1	5 00		100
5 00	230 00		230 00						3 00						25
18 00	828 00		828 00						2 00						150
6 00	234 00		234 00						3 00					10	
9 00	414 00		414 00						3 00						
9 00	441 00		441 00						3 50					9	50
9 00	396 00		396 00					50	3 50			1	5 00	4	100
7 50	360 00		360 00						3 00					10	50
7 50	360 00		360 00						3 25					1 1/2	100
7 50	195 00		195 00						3 00					3	100
9 00	315 00		315 00						4 00						200
16 50	858 00		858 00					300	4 50	2,500	2	7 00			1,000
10 50	546 00		546 00						3 50						150
7 50	345 00	72	417 00					100	3 25					7	1,600
7 50	360 00		360 00						3 00					6	100
7 50	345 00		345 00						3 00					7 1/2	40
7 50	390 00		390 00						3 00						

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	12	U. S.	U. S.	s						48	4	no work
"	27	Germany	Germany	s						45	7	"
Machinist	21	U. S.	"	s						52		"
Machine hand	34	"	U. S.	s				1	1	46	6	no work
Machinist	21	"	Germany	s						52		"
"	20	Canada	U. S.	s						52		"
Pattern maker	26	U. S.	"	s						52		"
Machinist	20	"	"	s						44	8	no work
"	25	Germany	Germany	m	2	2				52		"
Pattern maker	38	England	England	m	1	1		1	2	52		"
Machine hand	22	U. S.	Germany	m	2	2			1	52		"
Machinist	24	Germany	"	m	2	2		1	4	52		"
Laborer	21	U. S.	U. S.	m	1	1				51	1	no work
"	36	Germany	Germany	m	2	2			2	44	8	sickness
Machine hand	24	Canada	Canada	m	1	1			2	52		"
"	33	Germany	Germany	m	1	1			2	39	13	no work
Machinist	33	"	"	wr	3	3	1		3	52		"
Laborer	40	"	"	m						52		"
Machinist	23	Canada	Canada	m					1	50		"
Machine hand	31	U. S.	Germany	m					1	51	1	no work
Tester	35	Canada	Canada	m					1	15	37	sickness
Machine hand	26	U. S.	Germany	m					1	52		"
Foreman	28	Germany	"	m					1	52		"
Laborer	35	Ireland	Ireland	m	5	5	2		6	47	5	no work
"	39	Germany	Germany	m	5	5	1		6	49	3	"
"	36	"	"	m	2	2			3	39	13	"
"	27	"	"	m	1	1			2	48	4	"
"	44	"	"	m	5	5			6	37	15	"
"	28	Canada	England	m	2	2			2	35	17	"
"	31	Germany	Germany	m	2	2			2	38	14	"
"	50	"	"	wr	7	7	4		7	26	26	"
"	23	U. S.	U. S.	m					1	44	8	"
"	45	Germany	Germany	m	5	5	3		6	39	13	"
"	38	"	"	m	5	5	1		6	40		first work in U. S.
"	38	"	"	m	5	5	3		6	50	2	no work
"	56	U. S.	U. S.	m	4	3			4	47	5	"
"	32	Germany	Germany	m	2	2		1	4	44	8	"
Molder	23	"	"	m					1	44	8	"
"	25	"	"	m	2	2			4	44	8	"
Melter	26	Canada	England	m	2	2			3	49	3	"
Core maker	33	U. S.	U. S.	m	3	3	1		4	47	5	sick and no work
"	25	Germany	Germany	m	2	2			3	48	4	no work
Pattern maker	26	England	England	s						52		"
"	23	U. S.	U. S.	s						52		"
"	25	"	"	s						52		"
Machinist	20	"	Germany	s						52		"
Laborer	31	Germany	"	s						49	3	no work
"	25	"	"	s						35	17	"
"	18	"	"	s						47	5	"
Core maker	18	"	"	s						48	4	"
"	16	"	"	s						44	8	"
"	16	U. S.	Austria	s						39	13	not answered
Machine hand	17	"	Canada	s						53		"
"	19	"	Germany	s						39	13	no work
"	18	"	"	s						46	6	"

TABLE No. 1.—CONTINUED.—*Showing Individual Report.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$360 00		\$360 00					\$25		\$3 50						
7 50	337 50		337 50					50		3 50				1 1/2	\$3	\$100
15 00	790 00		790 00					100		4 50		1	\$5 00			300
9 00	414 00		414 00	\$414					\$3 50	3 50		1	5 00			500
12 00	624 00		624 00													300
13 50	702 00		702 00					150		3 00		1	5 00	4		300
16 50	858 00		858 00							4 00		1	5 00			750
5 00	220 00		220 00							3 50						75
12 00	624 00		624 00	384				240	7 00					13		500
14 25	741 00		741 00	400	\$800	\$600	\$150	150						1 1/2	20	400
9 00	468 00		468 00	375	900	200	75									1300
9 00	468 00		468 00	468					3 50					10		250
7 50	382 50		382 50	342					8 50							200
7 50	330 00		330 00	330	750	400					\$1000	1	5 00	12	50	500
10 50	546 00		546 00	546					4 00					5		200
9 00	351 00		351 00	351					5 00		2000	1	5 00	10		350
15 00	780 00		780 00							8 00	2500	1	5 00	23		800
7 50	390 00		390 00	390					10 00					8	25	300
15 00	780 00		780 00	780					10 00					4	180	400
10 50	535 50	\$250	785 50					200		10 00						600
7 50	112 50		112 50	212					4 00					11		250
10 50	546 00		546 00	446				100	6 00							150
18 00	936 00		936 00	936					8 00		2000			7		350
7 50	352 50		352 50	352					5 00					13	5	300
7 50	367 50		367 50	317	1,200	50	50				150			18		1400
7 50	292 50		292 50	292	1,000	500								7		800
8 10	398 80		398 80	398	850	600						1	5 00	4		400
7 50	277 50		277 50	277					4 50					16		250
7 50	262 50	75	337 50	297				50	8 00					15		150
7 50	285 00		285 00	285					5 00					4 1/2	250	300
7 50	195 00	150	345 00	395					8 00					9		200
7 50	330 00		330 00	330	1,000							1	5 00			1500
7 50	292 50		292 50	292					7 00					18		200
7 50	300 00		300 00	300					3 50					10 mo	150	300
10 50	525 00		525 00	375	1,200			150						9		1500
10 50	493 50		493 50	493					11 00		98					300
8 10	358 40		358 40	240	900	500	80					1	3 00	8	100	500
15 00	680 00		680 00	680					5 00		500	2	9 00	9		300
15 00	680 00	18	678 00	570				100	4 00		600	2	10 00	11		800
13 50	661 50		661 50	661					10 00					8	172	800
10 00	470 00		470 00	470					9 00							300
11 00	528 00		528 00	528					6 00		500	1	5 00	18		400
16 50	858 00		858 00					200		4 00	3000	1	15 00	17		500
21 00	1092 00	180	1272 00					300		4 00		1	5 00			1200
13 00	624 00		624 00					100		4 00						150
7 50	360 00		360 00							3 00						40
7 50	367 50		367 50							*				10		
6 00	210 00		210 00							*		1	8 00	12		50
8 50	164 50		164 50							*				12		
6 00	288 00		288 00							*				8		
4 50	198 00		198 00							*				8		
4 50	175 50		175 50							*						
7 50	360 00		360 00							*						
7 50	292 50		292 50							*						
6 00	276 00		276 00							*						650

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machine hand.....	17	Germany..	Germany..	s	—	—	—	—	—	52	—	—
Laborer.....	17	U. S.....	U. S.....	s	—	—	—	—	—	48	4	no work
Machine hand.....	16	".....	Germany..	s	—	—	—	—	—	47	5	"
Laborer.....	19	".....	".....	s	—	—	—	—	—	48	4	"
Core maker.....	20	".....	U. S.....	s	—	—	—	—	3	39	13	"
".....	21	Canada..	".....	s	—	—	—	—	3	48	4	"
".....	22	Germany..	Germany..	s	—	—	—	—	3	35	17	"
Laborer.....	21	U. S.....	U. S.....	s	—	—	—	—	3	26	26	"
Machine hand.....	30	".....	Germany..	s	—	—	—	—	3	52	—	—
Machinist.....	23	Germany..	".....	s	—	—	—	—	3	52	—	—
GRIFFIN CAR WHEEL CO.												
Laborer.....	26	Germany..	".....	m	—	—	—	—	1	52	—	—
".....	27	Poland..	Poland..	m	—	—	—	—	1	52	—	—
".....	42	Germany..	Germany..	m	6	6	3	—	6	52	—	—
".....	31	Poland..	Poland..	m	3	3	—	—	4	48	4	no work
Molder.....	36	Ireland..	Ireland..	m	5	5	2	—	6	52	—	—
".....	34	Germany..	Germany..	m	5	5	3	1	7	52	—	—
Helper.....	24	".....	".....	m	1	1	—	—	1	52	—	—
".....	21	".....	".....	m	—	—	—	—	1	52	—	—
Molder.....	38	".....	".....	m	4	4	1	—	5	52	—	—
".....	25	".....	".....	m	2	2	—	2	5	52	—	—
".....	39	".....	".....	m	3	3	—	—	4	52	—	—
".....	34	".....	".....	m	6	6	3	—	7	52	—	—
Pattern maker.....	34	Canada..	Canada..	m	—	—	—	—	1	52	—	—
".....	41	Ireland..	Ireland..	m	4	4	4	—	5	35	—	first work in U. S.
".....	55	England..	England..	m	2	1	—	—	2	52	—	—
Machine hand.....	35	U. S.....	Germany..	m	2	2	—	—	3	52	—	—
Laborer.....	30	Poland..	Poland..	m	2	2	—	—	3	44	8	no work
".....	33	Germany..	Germany..	m	4	4	1	—	5	39	13	sickness
".....	32	".....	".....	m	1	1	—	—	2	44	8	no work
".....	29	Poland..	Poland..	m	—	—	—	—	1	52	—	—
".....	38	Germany..	Germany..	m	6	6	3	—	7	48	4	no work
".....	33	".....	".....	m	3	3	—	2	6	44	8	"
".....	27	Poland..	Poland..	m	2	2	—	—	3	39	13	"
".....	28	".....	".....	m	1	1	—	—	2	44	8	"
Helper.....	24	Germany..	Germany..	s	—	—	—	—	—	44	8	"
".....	20	U. S.....	".....	s	—	—	—	—	—	48	4	laid off
".....	28	Germany..	".....	s	—	—	—	—	—	48	4	no work
".....	21	".....	".....	s	—	—	—	—	—	44	8	"
".....	18	".....	".....	s	—	—	—	—	—	52	—	—
Molder.....	26	".....	".....	s	—	—	—	—	—	44	8	sick and no work
".....	30	".....	".....	s	—	—	—	1	1	52	—	—
Helper.....	16	".....	".....	s	—	—	—	—	—	52	—	—
".....	21	".....	".....	s	—	—	—	—	—	52	—	—
".....	18	".....	".....	s	—	—	—	—	—	52	—	—
".....	20	".....	".....	s	—	—	—	—	—	26	26	no work
".....	19	".....	".....	s	—	—	—	—	—	52	—	—
Laborer.....	28	Ireland..	Ireland..	s	—	—	—	—	—	52	—	—
".....	15	U. S.....	England..	s	—	—	—	—	—	39	13	no work
Elevator boy.....	19	Germany..	Germany..	s	—	—	—	—	—	52	—	—
Laborer.....	26	Poland..	Poland..	s	—	—	—	1	1	39	13	no work
".....	23	".....	".....	s	—	—	—	—	—	39	13	"
".....	26	".....	".....	s	—	—	—	1	1	17	35	"
Machine hand.....	25	Ireland..	Ireland..	s	—	—	—	—	—	52	—	—

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total Annual income.		If owing home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$4 50	\$234 00		\$234 00													
6 00	285 00		285 00													
12 00	141 00		141 00													
7 50	360 00		360 00													
11 00	428 00		428 00	\$428												\$50 60
12 00	576 00		576 00	476				\$100								500
9 00	315 00		315 00	315											22	150
7 50	130 00		130 00	130												75
7 50	380 00		380 00	280				100				1	\$5 00			200
15 00	780 00		780 00	580				200							18	250
9 00	468 00		468 00	468					\$2 75						3	150
4 40	436 80		436 80	436					3 00			1	5 00		3	75
6 80	343 20	\$200	543 20	543	\$700	\$100									9	700
7 00	336 00		336 00	336					3 50						10	300
15 00	780 00		780 00	780					8 50						26	300
12 00	624 00		624 00	624	1,500	800					\$1,000				14	1,300
7 50	380 00		380 00	380					free						7	200
9 00	468 00		468 00	468											7	80
10 50	546 00		546 00	546	900										11	1,200
10 50	546 00		546 00	446	1,150	750		100							9	1,300
10 50	546 00		546 00	546	1,400						800				9	1,600
10 50	546 00		546 00	546					5 50						11	300
24 00	1,248 00		1,248 00	1,248					15 00			1	4 00		5	1,000
13 50	472 50		472 50	472	2,000				20 00						25	500
16 50	856 00		856 00	856											30	3,000
9 00	468 00		468 00	468					6 00						3	200
7 50	380 00		380 00	380					3 50						3	30
9 00	351 00		351 00	351					4 00		40				15	500
4 10	356 40		356 40	356					3 00						1	200
4 10	421 20		421 20	421					3 50		300	1	6 00		6	200
8 10	368 80		368 80	368					4 00			1	4 00		9	300
8 10	356 40		356 40	356					3 00						6	100
9 00	351 00		351 00	351	1,000	800					70				1	300
7 50	380 00		380 00	380					3 00						6	350
6 80	303 60		303 60							\$3 00					3	100
8 40	403 20		403 20						3 50						3	25
8 40	403 20		403 20					100		3 50					22	150
7 50	380 00		380 00					80							21	150
6 00	312 00		312 00												2	
9 00	386 00		386 00												9	25
10 50	546 00		546 00					100		3 00					10	200
4 50	234 00		234 00												4	
7 50	380 00		380 00												6	50
6 80	343 20		343 20												9	
6 50	169 00		169 00						3 25						2	150
4 40	436 80		436 80												4	50
9 00	468 00		468 00							4 00					2	30
4 20	163 80		163 80													
6 00	312 00		312 00													25
8 10	315 90		315 90	315											10	80
8 10	315 90		315 90							3 00					18	70
7 50	127 50		127 50						3 25		1,000	1	5 00		5	25
10 50	546 00		546 00					100	4 00						2	150

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machine hand	21	Germany	Germany	s						52		
Pattern maker	27	U. S.	France	s				3	3	52		
Laborer	38	Germany	Germany	m	4	4	1		5	39	13	no work
"	38	"	"	m	2	2			4	52		
"	38	"	"	m	2	3			4	52		
Molder	29	"	"	m	4	4	1		5	52		
"	34	U. S.	Scotland	m	3	3	2	1	5	52		
Helper	24	Germany	Germany	m	1	1			2	45	4	no work
Molder	33	"	"	m	2	2			3	52		
"	37	"	"	m	3	3	3	2	6	52		
"	26	"	"	m	1	1			2	52		
"	25	"	"	m	1	1			2	52		
Helper	31	"	"	m	3	3		1	5	52		
Molder	26	Poland	Poland	m	1	1			1	52		
"	27	Ireland	Ireland	m	1	1			1	52		
Laborer	35	Germany	Germany	m	3	3	1		4	52		
"	26	Poland	Poland	m	4	4			1	34	18	no work
"	50	"	"	m	4	4	1		5	52		
Chipper	34	Ireland	Ireland	m	3	3			4	52		
"	42	"	"	m	4	4	3		5	52		
Laborer	40	Poland	Poland	m	2	2			3	52		
Molder	30	Germany	Germany	m	1	1			2	52		
"	29	"	"	m	2	2			3	52		
"	28	"	"	m	2	2			1	52		
Helper	29	"	"	m	2	2		2	5	44	8	sick and no work
Molder	26	U. S.	"	m	2	2			1	52		
"	30	Germany	"	m	2	2			3	52		
Helper	26	"	"	m	1	1			2	39	13	no work
"	22	Poland	Poland	m	1	1		1	3	39	13	"
Molder	28	Germany	Germany	m	4	4	1		5	52		
"	34	"	"	m	2	2	1		3	52		
Helper	28	Poland	Poland	m	1	1			2	52		
Laborer	28	U. S.	U. S.	m	1	1			1	39	13	no work
Molder	35	Germany	Germany	m	5	5	2		6	42	10	sickness
Helper	44	"	"	m	7	6	3		7	50	2	no work
Molder	29	"	"	m	3	3	1		5	52		
Laborer	50	Poland	Poland	w'r	5	2	2		2	52		
Helper	21	Germany	Germany	s				1	1	52		
"	17	U. S.	"	s						50	2	no work
"	17	"	"	s						48	4	"
"	18	"	U. S.	s						52		
"	17	Germany	Germany	s						52		
"	17	U. S.	"	s						52		
"	22	Germany	"	s			1	1	1	52		
"	16	"	"	s						52		
"	17	"	"	s						44	8	no work
"	17	U. S.	"	s						52		
"	17	Germany	"	s						52		
"	23	Ireland	Ireland	s			1	1	1	52		
"	20	Germany	Germany	s						52		
"	24	"	"	s						34	18	no work
Laborer	19	"	"	s						52		
Helper	18	U. S.	"	s						52		
Laborer	35	Poland	Poland	s						44	8	no work
"	36	Ireland	Ireland	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$468 00		\$468 00							\$3 50		1	\$4 00	18		\$90
15 00	780 00		780 00					\$200		5 00						1,500
8 40	327 60		327 60	\$327	\$1,200	\$100					\$500	1	4 00	9		1,300
9 90	514 80		514 80		1,200	100	\$100	25						12	\$150	1,400
8 40	436 80		436 80	236	1,200	200								4	100	1,500
25 00	1,300 00		1,300 00	600	1,000	400	200				1,000			11		1,400
20 00	1,040 00		1,040 00	800	2,900	800	150				1,000	1	5 00			2,500
11 50	552 00		552 00	475				50	\$4 00					6		400
14 00	728 00		728 00	728	600									8		1,000
25 00	1,300 00		1,300 00	700	700							1	5 00	11	300	800
18 00	936 00		936 00	600	900	200	300				100	1	5 00	7		900
14 00	728 00		728 00	430				100	5 00					9		200
10 00	520 00		520 00	440	1,100	700	40							7		550
11 50	598 00		598 00	598					5 00					6		300
15 00	780 00		780 00	630	1,000			150			2,000	1	5 00	8		2,000
7 50	390 00		390 00	390	1,000	300						1	5 00	8		1,000
8 10	275 40		275 40	275					3 50					4		100
8 10	421 20		421 20	421					4 50			1	5 00	10	100	200
9 00	468 00	\$224	692 00	692					10 00			1	5 00	10		200
12 00	624 00	300	924 00	924	1,800	100					2,000			24		1,850
8 10	421 20		421 20	421					4 00			1	5 00	8		300
12 00	624 00		624 00	624	1,200									9		1,550
15 00	780 00	25	805 00	700				50	4 00		300	1	9 00	10	10	1,100
10 50	546 00		546 00	471				75	5 00					18		150
9 00	396 00	36	432 00	375	900	300		50						10	300	750
15 00	780 00		780 00	650				75	12 00		2,100	1	5 00			900
11 25	585 00		585 00	450	500		100	30						5 1/2	40	700
6 90	269 10		269 10	269					4 00		1,000	1	8 00			100
7 50	292 50		292 50	292	1,500						1,000	1	5 00	9		1,900
10 50	546 00		546 00	546	500	300					230	1	5 00	9		400
23 00	1,196 00		1,196 00	800	1,000						2,000	1	5 00	10		1,300
11 10	577 20		577 20	425	1,000	600	100				600	1	5 00	8	50	700
8 40	327 60		327 60	327					8 00							150
26 00	1,092 00		1,092 00	1,092	1,400						2,000	1	4 00	20		1,800
10 00	500 00	350	850 00	700	1,200	200	100							20		1,500
24 00	1,248 00		1,248 00	750	1,800			50			600	1	5 00	22		2,500
7 50	390 00		390 00	390	800									8		1,000
9 00	468 00		468 00	468					†					8		100
3 00	180 00		180 00					*		*				6		
3 00	172 80		172 80					*		*				6		
11 50	598 00		598 00						†							
4 20	218 40		218 40					*		*				6		
5 40	280 80		280 80					*		*						
10 00	520 00		520 00					100		3 50				8		1,000
4 00	239 20		239 20					*		*				4		
3 00	132 00		132 00					*		*				7		
3 00	187 20		187 20					*		*						
4 20	218 40		218 40					*		*				10		
12 00	624 00	200	824 00					150		5 00	2,000			21		3,000
10 00	520 00		520 00					50		3 50		1	5 00	7		300
12 00	408 00		408 00					180		3 25		1	5 00	2	200	450
6 00	343 20		343 20					*		*				3		50
5 00	291 20		291 20					*		*						
8 10	356 40		356 40						3 00					3		25
12 00	624 00		624 00					300		4 25	2,000	1	5 00	9	200	1,000

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Core maker	18	Germany	Germany	m						52		
"	22	"	"	m						52		
"	21	"	"	m						52		
Helper	17	"	"	m						52		
Laborer	20	Poland	Poland	m					1	48	4	no work
"	23	"	"	m						52		
"	25	"	"	m						48	4	no work
Helper	19	"	"	m						52		
Core maker	21	Germany	Germany	m						52		
"	21	"	"	m						52		
Helper	18	Canada	"	m						50	2	vacation
"	21	Poland	Poland	m						17	35	no work
"	23	Germany	Germany	m						22	30	sick and no work
"	20	"	"	m						48	4	vacation
"	18	"	"	m						48	4	accident
Core maker	15	U. S.	Poland	m						44	8	no work
Molder	24	"	Ireland	m					2	52		
Office boy	17	"	"	m						52		
Core maker	15	Canada	Canada	m						13		first work
Helper	24	Ireland	Ireland	m						52		
DETROIT ELECTRICAL WORKS.												
Engineer	33	Canada	Canada	m	2	2			3	52		
Blacksmith	28	"	Ireland	m	3	3			4	52		
Machinist	40	Germany	Germany	m	5	5	3		6	52		
"	39	U. S.	Ireland	m	3	3	2	1	5	26	26	no work
"	28	"	England	m	1	1	1		2	52		
Laborer	25	"	Ireland	m					1	17	35	no work
Foreman	35	"	Germany	m	2	2			3	52		
Machinist	30	Canada	Canada	m	1	1			2	52		
"	30	U. S.	Scotland	m	1	1			2	48	4	no work
Electrician	28	"	England	m	1	1	1		2	44	8	
"	33	"	U. S.	m					1	26	26	no work
"	36	Canada	Canada	m					1	52		
"	30	U. S.	U. S.	m	1	1	1		2	52		
Machinist	48	"	"	m	1	1			2	42	10	no work
Laborer	37	Canada	England	m	2	2	1		3	24	28	
Foreman	48	U. S.	U. S.	m	2	3	1		3	52		
Armature winder	21	England	England	m					1	52		
Locksmith	32	Germany	Germany	m	1	1			2	52		
Brass finisher	31	"	"	m	2	2	1		3	52		
"	24	U. S.	"	m	1	1			2	34	18	no work
"	31	Germany	"	m	1	1			2	52		
Machinist	26	U. S.	U. S.	m	1	1			2	48	4	no work
Pattern maker	35	"	"	m	5	5			5	48	4	laid off
Dynamo constructor	26	"	Ireland	m	1	1			2	52		
Wood worker	61	England	England	m	3	3			1	48	4	sickness
Foreman	36	Ireland	Ireland	m	2	2			2	52		
Cabinet maker	39	U. S.	"	m	2	2	1		3	48	4	no work
Laborer	38	Germany	Germany	m	4	4	1		5	52		
Cabinet maker	29	"	"	m	2	2		1	4	52		
Brass molder	25	U. S.	"	m					1	39	13	no work
Brass molder	19	"	U. S.	m					1	32		
Machine hand	38	Scotland	Scotland	m	3	3	2		4	52		
"	33	U. S.	Ireland	m	3	3			4	34	18	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.	Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.		If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$6 00	\$312 00		\$312 00										4		\$33
8 00	416 00		416 00						\$3 50				6		25
13 00	468 00		468 00						*				2		
15 50	360 00		360 00						3 00				1		20
7 50	390 00		390 00						3 00				1		15
7 50	360 00		360 00						3 00				1		13
6 80	358 80		358 80						*				9		13
8 25	429 00		429 00						3 50				10		13
10 50	546 00		546 00						3 50				9		175
6 80	345 00		345 00												
6 80	117 30		117 30						3 25				10		
7 50	165 00		165 00						*		1	\$5 00	3		25
7 50	360 00		360 00						3 00				6		35
7 50	360 00		360 00						*				4		50
3 80	158 40		158 40						*						
24 00	1248 00		1248 00						*						
7 50	360 00		360 00						10 00						75
4 80	62 40		62 40						*						
10 50	546 00		546 00						*				1		25
14 00	728 00		728 00	\$420	\$2,000	\$1,500	\$200						14		2,000
12 00	624 00		624 00										25		1,000
13 50	702 00		702 00				100		\$10 00				26		500
13 50	351 00		351 00						12 00	\$3,000	1	15 00			450
13 50	702 00		702 00		1,700	900	150				1	5 00			1,400
7 00	119 00	\$300	419 00	419				11 00		150					400
18 00	936 00	120	1,056 00	850	3,500		200				1	4 00			5,000
12 00	624 00		624 00	624				13 00			1		7	\$250	300
10 50	504 00		504 00	592				8 00			1	8 00			400
9 00	396 00		396 00	396				7 00		2,500	1	5 00			800
12 00	312 00		312 00	312				4 50							40
12 00	624 00		624 00	400	1,600	700	170			1,000	1	5 00	11	400	1,400
9 00	468 00		468 00	388				10 00							700
10 50	441 00		441 00	441			100	12 00			1	5 00	26		1,000
8 00	192 00		192 00	192	2,800	1,400									2,000
16 50	858 00		858 00	858				18 00		2,000					1,500
11 00	572 00		572 00	572				10 00					18		650
10 50	546 00		546 00	546				7 00		2,000	1	5 00	9	6	500
10 50	546 00		546 00	546				6 50			1	5 00	8		300
15 00	510 00		510 00	510				8 00							550
12 00	624 00		624 00	450	1,800	800	100			500	3	15 00	9	25	1,800
9 00	432 00		432 00						3 00						150
10 50	504 00		504 00						4 00						150
12 50	650 00	60	710 00	625	5,000		75			1,000	1	5 00			8,000
12 00	576 00		576 00	450				10 00		2,500			32		650
15 00	780 00		780 00	425	2,000	300	340						22		2,300
10 75	516 00		516 00	300	3,000	1,900									2,000
7 50	390 00	200	390 00	390			300	7 00		1,000			8	50	500
12 00	624 00		624 00	400	1,600	800	100			300	1	5 00	8		1,200
13 50	526 50		526 50	526				9 00		2,000	1				500
9 00	468 00		468 00	208			200	4 00							300
12 00	624 00		624 00	550	1,400	1,300	100						18	600	800
7 50	255 00		255 00	255				7 00							100

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	66	England	England	m	8				1	52		
Machine hand	40	U. S.	Ireland	m	5	4	2		5	52		
Foreman	25	"	"	m	1	1			2	52		
Laborer	37	Ireland	"	m	3	3	1		4	52		
Pattern maker	27	Australia	Germany	m	1	1			2	52		
Electro plater	29	England	England	m	2	2			3	52		
Metal polisher	47	U. S.	U. S.	m	4	4	3		5	34	18	no work
Foreman	46	England	England	m	6	6		7	7	51	1	
Electrician	19	Germany	Germany	s				2	2	52		
Brass molder	26	U. S.	Ireland	s				1	1	52		
Machine hand	25	"	U. S.	s				1	1	52		
Annunciator maker	23	Canada	Canada	s				2	2	48	4	no work
Brass finisher	21	U. S.	U. S.	s				1	1	44	8	no work
Machinist	24	"	"	s				1	1	52		
Helper	22	"	Ireland	s						52		
Laborer	28	Ireland	"	s						52		
Machinist	25	England	England	s						52		
Machine hand	22	Canada	Canada	s						52		
Clerk	15	U. S.	U. S.	s						52		
Machine hand	26	Canada	Canada	s						13		first work in U. S.
"	16	U. S.	U. S.	s						52		
Machinist	21	Germany	Germany	s				1	1	52		
"	27	U. S.	"	s				2	2	52		
Electrician	23	"	U. S.	s						44	8	vacation
"	22	Canada	Canada	s						22		first work in U. S.
"	20	U. S.	U. S.	s						49	3	vacation
"	20	Germany	Germany	s						26	26	sickness
"	25	U. S.	Hungary	s						52		
Armature winder	17	Canada	U. S.	s						39	13	sick and no work
"	19	"	Germany	s						17	35	"
"	23	Germany	"	s						39	13	no work
Brass finisher	20	U. S.	"	s						52		
"	22	Germany	"	s						34	18	no work
"	22	U. S.	Ireland	s						52		
Pattern maker	25	Canada	Canada	s						39	13	laid off
Machinist	38	U. S.	Ireland	s				1	1	50	2	no work
Cabinet maker	30	Canada	Scotland	s						52		
Electrician	26	U. S.	"	s				1	1	52		
"	27	"	U. S.	s				1	1	34	18	no work
"	17	Canada	England	s						26	26	"
Laquerer	16	U. S.	U. S.	s						44	8	"
Electrician	17	"	"	s						52		
Brass finisher	17	England	England	s						39	13	no work
"	22	Germany	Germany	s						22	30	"
Machinist	22	England	England	s						30	22	"
Machine hand	16	U. S.	Ireland	s						26	26	"
Laborer	16	Canada	U. S.	s						52		
Machinist	28	"	Canada	s						35	17	sickness
Electrician	18	U. S.	France	s						52		
"	21	"	England	s						52		
Finisher	18	"	U. S.	s						52		
"	19	Germany	Germany	s						52		
Armature winder	23	U. S.	U. S.	s						52		
"	20	England	England	s						26	26	no work
Core maker	17	Canada	Canada	s						39	13	"

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$6 00	\$512 00		\$512 00	\$312					\$11 00					10	\$50	\$200
9 00	468 00		468 00	580					10 00					10	50	450
16 50	858 00	\$250 30	1,108 30	938				\$135 450	15 00		\$1,000	1	\$5 00	15	800	3,500
7 50	890 00		890 00	800				300	6 50					8	500	800
18 00	996 00	150	1,086 00	760					10 00		2,000					1,000
7 00	364 00		364 00	864					8 00					9	280	300
10 50	357 00		357 00	857					2 00		4,000	3	13 00	9		400
12 00	612 00	200	812 00	812					11 00		50	1	4 00	9	250	600
12 00	624 00		624 00	624					†					6		250
18 00	996 00		996 00	936					10 00		2,000					300
7 50	390 00		390 00	390					20 00							50
9 00	432 00		432 00	432					†		2,000	1	5 00	15		25
7 50	330 00		330 00	330					†							100
12 00	624 00		624 00	624					†							100
8 40	436 80		436 80						†	\$4 50						80
6 00	312 00		312 00							4 00				8		20
12 00	624 00		624 00							5 00	1,000	1	4 00	3	100	120
9 00	468 00		468 00							8 50				2	20	150
3 50	182 00		182 00							2 00						150
7 50	97 50		97 50							3 50				14	10	100
5 40	280 80		280 80					*	*	*						
11 40	592 80		592 80					250	3 00					19		550
15 00	760 00		760 00					100	5 00		2,000					500
8 40	389 60		389 60					40	4 00							50
7 50	165 00		165 00						3 00					1/2	20	100
10 50	514 50		514 50					50	4 00							1,000
7 50	195 00		195 00						4 00					2		50
9 50	494 00		494 00					260	6 00	1,000	1	25 00				500
7 50	292 50		292 50						3 00					1		
6 00	102 00		102 00						8 50					3		150
9 00	351 00		351 00						3 50					3		75
7 50	390 00		390 00					60	3 00							90
10 00	340 00		340 00						4 00	2,000	1	5 00		14		75
6 50	338 00		338 00						3 50							100
15 00	585 00		585 00						6 00					2	75	125
9 00	450 00		450 00						5 00							35
10 50	546 00		546 00					100	3 50					23		200
7 50	390 00		390 00						4 50							40
15 00	510 00	120	630 00					400	5 00							1,700
4 50	117 00		117 00						4 00					15		
4 50	198 00		198 00					*	*							100
4 00	208 00		208 00					*	1 50							
4 50	175 50		175 50					*	*					1		
7 50	165 00		165 00						3 50					7		60
9 00	270 00		270 00						4 00					7		100
3 00	78 00		78 00					*	*							
3 50	182 00		182 00					*	*							
10 50	367 50		367 50						5 00					2		75
7 50	390 00		390 00					*	*					3 1/2	1700	
9 00	468 00		468 00					15	*							100
6 00	312 00		312 00					25	3 00							250
6 00	312 00		312 00					*	*					12		15
8 00	416 00		416 00						3 50							350
7 50	196 00		196 00						4 00					19		50
4 50	175 50		175 50					15	3 00					10		

* Lives at home and gives wages to parents.

† Lives at home and supports family.

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Brass molder	23	Holland	Holland	s				4	4	52		
	27	U. S.	Ireland	s						30	13	no work
Machine hand	18	"	U. S.	s						30	13	"
	22	Canada	Canada	s						52		
"	19	U. S.	England	s						44	8	no work
Foreman	32	"	U. S.	s				4	4	52		
Laborer	16	"	Ireland	s						52		
Foreman	32	Canada	Scotland	s						52		
Machinist	29	U. S.	U. S.	s						48	4	no work
Machine hand	19	Canada	Canada	s						52		
"	20	"	England	s						52		
Brass finisher	18	"	Canada	s						49	3	no work
Laborer	17	"	England	s						52		
Machine hand	18	U. S.	Ireland	s						52		
Annunciator maker.	20	Canada	Canada	s						52		
"	20	U. S.	Germany	s						52		
Machine hand	16	"	England	s						48	4	not answered
"	17	"	U. S.	s						17		first work
"	23	"	Ireland	s						35	17	no work
"	20	"	"	s						52		
Foreman	24	"	U. S.	s						52		
Annunciator maker	22	England	England	s						52		
Clerk	17	Canada	Canada	s						46	6	no work
"	26	"	"	s						30	13	"
Metal polisher	18	U. S.	U. S.	s				1	1	52		
"	52	"	"	s						52		
Machinist	25	"	"	s				1	1	52		
SAMUEL F. HODGE & COMPANY.												
Blacksmith	44	England	England	m	3	3	2		4	52		
Machinist	50	Ireland	Ireland	m	10	4	3		5	52		
"	25	Scotland	Scotland	m	1	1		2	3	52		
"	35	U. S.	Germany	m	4	4	2		5	52		
"	45	Germany	"	m	4	4	3		5	52		
Blacksmith	27	U. S.	"	m	2	1			2	52		
Helper	31	Canada	Canada	m	1	1			2	52		
Machinist	25	"	Ireland	m	1	1			1	53		
Pattern maker	27	U. S.	Scotland	m	1	1			2	52		
"	45	Canada	"	m	3	3	2		4	39	13	no work
Helper	40	Germany	Germany	m	5	5	3		6	44	8	"
"	26	U. S.	"	m	1	1			2	39	13	"
Blacksmith	30	Belgium	England	m	3	3			4	52		
Helper	39	Germany	Germany	m	5	5	3		6	44	8	sickness
"	34	Canada	Canada	m	1	1			2	52		
Laborer	33	Poland	Poland	m	2	2			3	52		
"	40	Germany	Germany	m	5	5	2		6	46	6	no work
Machinist	24	England	England	m	3	3		2	3	52		
"	34	Poland	Poland	m	3	3			4	52		
"	31	Germany	Germany	m	1	1			2	52		
"	33	U. S.	Scotland	m	2	2			3	52		
"	25	"	Germany	m	1	1			1	52		
"	50	England	England	m	5	5	2		6	52		
Laborer	35	Poland	Poland	m	5	5	1		6	52		
Machinist	35	Canada	England	m	5	5	4		6	52		
Machine hand	33	"	Ireland	m	4	4	3		5	48	4	sickness

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.			Total annual income.	Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.			If owning home, its value.	If in debt on home, am't.	Amount saved aside from payments on home.	Amount paid on home during the year.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
10 50	\$346 00		\$346 00							\$6 00				18		\$75
13 50	526 50		526 50							4 00						300
3 00	117 00		117 00							*						
5 00	280 00		280 00					\$30		2 50						235
3 00	132 00		132 00							1 50						35
12 00	624 00		624 00							5 00						150
3 50	182 00		182 00					*		*						
15 00	780 00		780 00					100		5 00	\$100	1	\$5 00	30		1,200
12 00	576 00		576 00					75		4 00						500
4 50	234 00		234 00					40		2 50				6		80
3 00	156 00		156 00					*		*				6		40
10 50	514 50		514 50							4 00				7		
3 50	182 00		182 00							3 00				10		
4 50	234 00		234 00							3 00						
7 50	380 00		380 00					25		2 50				12		100
9 00	468 00		468 00							4 50						100
3 50	168 00		168 00							free						
3 00	51 00		51 00							free						
7 50	282 50		282 50							3 00						66
9 00	468 00		468 00							5 00						50
18 00	936 00		936 00							5 00						500
10 00	520 00		520 00					30		5 00				19		350
7 00	322 00		322 00							2 50				3		100
10 00	380 00		380 00					50		4 25				9	\$500	300
5 00	200 00		200 00							2 50						
9 00	468 00		468 00							4 50						100
15 00	780 00		780 00							5 00						2,500
18 00	936 00		936 00	\$900	\$1200						2,000	1	3 00	20	50	3,000
15 00	780 00	\$270	1,050 00	800	6,000		\$150	300				1	5 00	21	1200	8,000
15 00	780 00		780 00	780					\$10 00		1,000	1	5 00	3½	120	500
15 00	780 00		780 00	780					free			1	5 00			850
15 00	780 00		780 00	780	1,800						1,000	1	5 00	30		2,200
14 25	741 00		741 00	741					9 50							500
9 00	468 00	180	648 00	648					19 00		2,000	1	5 00	30		600
14 40	748 80	150	898 80	898					11 00		1,000	1	5 00	23		500
16 00	832 00		832 00	832					13 00		2,000	1	10 00			600
15 00	735 00	150	735 00	735					16 00		2,000	2	10 00	40		500
8 10	356 40		356 40	356					5 00					35		75
8 40	327 60		327 60	327					7 00			1	3 00			300
15 00	780 00		780 00	780					8 00					10	50	200
15 00	680 00		680 00	680	2,000									30		2,500
8 30	431 60		431 60	431					8 00		1,000			7½		300
7 50	380 00		380 00	340	800	\$300	50							8	25	700
7 50	345 00		345 00	345										6	125	300
14 50	754 00		754 00	650				100		8 50	1,000		3 00	3	5	200
10 50	546 00		546 00	546					4 00			1	5 00	18		300
16 00	832 00	300	1,132 00	600	3,000	1,200	300	200			1,000		25 00	13		2,300
15 00	780 00		780 00	780					9 00		3,000	1	4 00			800
13 00	678 00		678 00	678					8 50			1	5 00			650
15 00	780 00	450	1,230 00	675	2,000	800	500	60			100	1	5 00	10	100	2,000
7 80	408 60		408 60	325	800	450						1	4 00	9		550
17 50	910 00		910 00	750				100		10 00	2,500	1	4 00	14		600
10 50	504 00		504 00	504					7 00							300

* Gives wages to parents and lives at home.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Helper	26	Germany	Germany	m	1	1		1	3	52		
Engineer	60	England	England	m	3	3	2			52		
Machinist	40		Scotland	m	1	1	1			52		
	35	Ireland	Ireland	m	3	3	1	1		52		
Laborer	29	Germany	Germany	m	2	2				39	13	no work
"	39	"	"	m	5	5	1		6	52		
	38	Poland	Poland	m	2	2	1			39	13	no work
Molder	47	Canada	Ireland	m	4	3	1			48	4	
Machinist	32	U. S.	Germany	m	2	2				52		
	31	"	U. S.	m	4	4				52		
Ship joiner	45	"	"	m	11	8	7		9	52		
Machinist	46	Scotland	Scotland	m	5	5	2			39	13	accident
	28	U. S.	"	m	2	2		1		52		
Shipping clerk	32	"	Ireland	m					1	52		
Laborer	38	Ireland	"	m	6	6	2		7	52		
"	36	Poland	Poland	m	5	5	2		6	52		
Carpenter	29	U. S.	Ireland	m	8	3	1		4	52		
	36	Holland	Holland	m	3	3	1		4	52		
Laborer	30	Poland	Poland	m	2	2			3	17	35	no work
	38	"	"	m	6	6	2		7	31	18	
"	35	Germany	Germany	m	7	7			8	26	26	"
	34	"	"	m	3	3	1		4	39	13	
Molder	41	Ireland	Ireland	m	7	7	4		8	52		
Laborer	65	"	"	m	3	3			4	24	18	sickness
	26	Germany	Germany	m	1	1		1	3	52		
"	47	"	"	m	5	5	2		6	52		
Molder	40	U. S.	Ireland	m	4	4	2		5	34	18	no work
Laborer	52	Ireland	"	m	7	6	3		7	52		
Molder	21	Canada	"	m	2	2			3	26	26	no work
Core maker	40	Ireland	"	m	2	2	1		3	30	22	
Molder	25	U. S.	England	m	1	1			2	52		
Laborer	28	Poland	Poland	m	2	2			3	39	13	no work
	25	Ireland	Ireland	m					1	39	13	"
"	39	Germany	Germany	m	4	4			5	39	13	
"	57	"	"	m	5	5	2		6	52		
Molder	30	"	"	m	4	4	2	2	7	50	2	no work
	60	England	England	m	8	3	2		4	52		
Machinist	45	Scotland	Ireland	wr	6	6	4		6	52		
Helper	47	"	Scotland	wr	5	3	1		4	44	8	sick and no work
Molder	40	England	England	wr	6	6	4		6	52		
Machinist	27	Canada	Canada	s						52		
	21	Sweden	Sweden	s						52		
Pattern maker	27	U. S.	Scotland	s						52		
	21	"	"	s			3		3	52		
Machine hand	17	"	Ireland	s						44		first work
Helper	49	Germany	Germany	s						52		
Machinist	30	Canada	Ireland	s			1	1	1	48	4	shut down
"	21	England	England	s						52		
"	18	U. S.	"	s						52		
Machine hand	17	"	Canada	s						34	18	no work
Machinist	19	"	"	s						52		
"	20	"	Germany	s						52		
"	20	"	U. S.	s						52		
"	30	Scotland	Scotland	s			1	1	1	44	8	no work
"	26	U. S.	"	s						52		

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$8 40	\$436 80		\$436 80	\$436					\$6 00			1	\$5 00	6	\$300	\$400
12 00	624 00		624 00	624	\$3000									40		3500
17 25	897 00	\$175	1072 00	650	4500		\$400				\$2500	1	4 00	21		5000
16 00	832 00	150	982 00	482	1500		200	\$300			2500			16		2200
7 50	292 50		292 50	292	700	\$800						1	4 00	6		400
7 50	390 00		390 00	390					3 50		300			9		400
7 50	292 50		292 50	292	800	300						1	4 00	10		700
15 00	720 00		720 00	720					14 00		3000	1	5 00	10		200
15 00	780 00		780 00	780	1300						1000					1800
15 00	780 00	1336	2116 00	600	6000	2000		1500								8000
15 00	780 00		780 00	680	800			100								1000
18 00	702 00	300	1002 00	1002					14 00					18		600
12 00	624 00		624 00	624					8 00		2000	1	5 00			500
15 00	780 00		780 00	680	2000			100			2000					3000
7 50	390 00		390 00	390					7 00					20		
7 50	390 00		390 00	300	1000	400	75				150	1	4 00	12	25	800
12 75	663 00		663 00	663					10 00							500
10 50	546 00		546 00	546					8 00					33		350
7 50	127 50	25	152 50	152					2 50					1		50
8 00	272 00		272 00	272	600						150	1	4 00	12		800
8 25	214 50		214 50	214	700	200								6		700
9 00	351 00		351 00	351					3 50			1	4 00			300
15 75	819 00	700	1519 00	1200				200	20 00		2000	1	5 00	22	70	700
7 50	255 00	500	755 00	550	1000		200							32		1500
7 50	380 00		380 00	350				30	3 50			1	3 00	23		70
7 50	380 00	500	880 00	880					8 00			2	10 00	19		400
15 00	510 00		510 00	510					12 00			1	3 00			500
7 50	380 00	450	740 00	700	1000			100						8	100	1500
15 00	380 00		380 00	380					7 00							450
8 25	247 50		247 50	247					7 50					29		200
16 50	858 00		858 00	600				200	12 00		50	1	5 00			600
9 00	351 00		351 00	351	1000	100								8		1400
7 50	292 50		292 50	292					7 00					2	10	100
7 50	292 50		292 50	242				50	3 00		200	1	4 00	9		400
7 50	380 00		380 00	380	1200	300					2000	1	3 00	10		1100
15 00	750 00		750 00	750					7 00					17		400
15 00	780 00		780 00	780					12 00		2000			33		700
15 00	780 00	108	888 00	888					19 00		2000			21		1500
8 00	352 00	300	652 00	652					8 00					2		300
15 00	780 00		780 00	780					13 00		2500	1	4 00	20	1000	500
15 00	780 00		780 00					40	\$4 50					3	100	300
12 00	624 00		624 00						3 00			1	4 00	5		450
15 00	780 00		780 00						3 00							1000
15 00	780 00		780 00					100	6 00							200
8 00	132 00		132 00					*	*							
8 10	421 20		421 30						5 00					8	70	25
15 00	720 00		720 00					150	4 50					10	150	2000
13 50	702 00		702 00						4 00			1	5 00	2	45	300
6 00	312 00		312 00						3 00							200
8 00	102 00		102 00						2 50							
4 50	234 00		234 00					*	*			1	10 00			25
6 00	312 00		312 00					*	*							100
4 50	234 00		234 00					*	*							125
13 50	584 00		584 00						4 10					9	500	60
15 00	780 00		780 00					200	3 50							600

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	22	U. S.	U. S.	s						52		
"	21	Canada	Scotland	s						52		
"	25	"	Ireland	s						39	18	no work
"	22	U. S.	U. S.	s						52		
"	22	Scotland	Scotland	s						50	2	no work
"	50	U. S.	England	s						52		
Carpenter	21	"	Canada	s						46	6	laid off
Machinist	21	"	France	s						52		
"	18	"	Scotland	s						51	1	no work
"	26	Scotland	"	s				1	1	39	13	
Laborer	22	Germany	Germany	s						26	26	
Machinist	22	Canada	Canada	s						52		
Book-keeper	21	"	Scotland	s						52		
Molder	23	U. S.	Ireland	s						52		
Laborer	28	Poland	Poland	s						44	8	no work
Machinist	27	Canada	Canada	s			1	1	1	52		
"	24	U. S.	Scotland	s						39	13	no work
Laborer	22	Poland	Poland	s				2	2	44	8	accident
Molder	23	Canada	England	s						34	18	sick and no work
Laborer	18	"	"	s						52		
Molder	24	U. S.	U. S.	s						44	8	laid off
"	22	"	"	s						52		
Laborer	21	Germany	Germany	s						44	8	no work
Molder	17	Canada	Scotland	s						52		
Laborer	27	Germany	Germany	s						26	26	no work
Molder	26	Sweden	Sweden	s						52		
Core maker	29	Ireland	Ireland	s						52		
"	18	U. S.	"	s						50	2	no work
GALVIN BRASS AND IRON WORKS.												
Machinist	34	U. S.	"	m	2	2	1		3	52		
Brass molder	28	"	"	m	1	1			1	48	4	no work
Laborer	30	Germany	Germany	m	1	1			2	48	4	"
Engineer	53	Ireland	Ireland	m	10	8	3		9	52		
Laborer	37	U. S.	U. S.	m	2	2	1		3	52		
Pattern maker	40	England	Ireland	m	1	1			2	52		
Blacksmith	52	Ireland	"	m	6	4			5	52		
Carpenter	34	U. S.	"	m	3	3	1		4	44	8	sick and no work
Pattern maker	60	Ireland	"	m	4	3	1		4	52		
Foreman	41	"	"	m	6	6	3		7	52		
Core maker	30	U. S.	"	m	1	1			2	50	2	no work
"	30	"	"	m	2	2	2		3	39	13	"
Molder	44	Ireland	"	m	6	6	4		7	48	4	"
"	32	Canada	"	m	2	2	2	1	4	52		
"	38	U. S.	"	m	5	5	2	1	7	52		
"	39	Ireland	"	m	7	7	2		8	42	10	no work
"	41	U. S.	"	m	6	6	2		7	52		
"	32	"	"	m	1	1	1		2	44	8	sickness
"	42	"	Scotland	m	1	1	1		3	52		
"	45	"	U. S.	m	6	6	4		7	48	4	no work
"	29	"	Ireland	m				2	3	39	13	accident & no work
Pattern maker	31	England	England	m	4	4	1		5	52		
Brass finisher	34	Scotland	Scotland	m	1	1		1	3	52		
"	39	England	England	m	4	4	3		5	52		
Machinist	24	U. S.	Ireland	m					1	48	4	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$ 00	\$312 00		\$312 00							\$ 00						\$100
6 00	312 00		312 00							4 00						50
8 10	315 90		315 90							8 50						100
15 00	780 00		780 00							4 50						300
15 00	750 00		750 00					\$200		4 00	\$180	2	\$8 00	2	25	450
15 75	819 00		819 00							4 00						1,000
14 25	655 50		655 50					175		4 00						400
18 50	702 00		702 00					*		5 00						80
8 00	153 00		153 00					*		*						100
13 50	526 50		526 50					50		4 00		1	5 00	2	50	200
7 50	195 00		195 00							4 50		1	5 00	5½		50
18 50	702 00	\$135	837 00					250		4 00					50	304
15 00	780 00		780 00							6 00				7		1,000
15 00	780 00		780 00							4 50						400
7 50	330 00		330 00							3 00				15		75
13 00	676 00		676 00					50		4 50	2,000	1	3 00	3	250	300
12 00	468 00		468 00					40		3 50						150
7 50	330 00		330 00					50		3 25	280			20		75
15 00	510 00		510 00							4 00	150	1	4 00	2	50	100
7 50	390 00		390 00							3 50				4		
15 00	690 00		690 00							no ans	5,000	4	24 00			125
15 00	780 00		780 00							3 50						150
7 50	330 00		330 00					*		*				16		15
4 50	234 00		234 00					*		4 00				13		100
7 50	195 00		195 00					*		*				3	130	35
15 00	780 00	150	930 00					400		5 00	5,000	1	5 00	12		2,000
9 00	468 00		468 00							8 50	1,000	1	5 00	10	25	500
7 50	375 00		375 00					*		*						
12 00	624 00		624 00	\$624					\$9 00							650
18 50	648 00		648 00	649					8 00							250
9 00	432 00		432 00	432					6 00			1	5 00	10	300	400
12 00	624 00	500	1,124 00	1,000	\$4,000			\$100		*	2,000			37		4,500
9 00	468 00		468 00	468					free							100
20 00	1040 00		1,040 00	1,040					10 00		2,000			19	100	400
12 00	624 00	400	1,024 00	1,024	2,000				8 00		2,000			42		2,500
10 00	440 00		440 00	440					13 00					18	200	100
12 00	624 00	200	824 00	824							2,000			18	100	600
9 00	468 00	400	868 00	675	950	\$900	120									850
12 00	600 00		600 00	600					8 50		2,000	1	5 00			150
7 50	292 50		292 50	292					5 00							125
12 00	576 00	700	1,276 00	550	2,500		700					1	6 00	38		8,000
12 00	624 00	250	874 00	720				150	16 00		2,000	1	5 00	30		900
18 00	936 00		936 00	936					5 00		2,000					500
13 50	567 00	250	817 00	817					10 00					32		350
15 00	780 00		780 00	780					8 00		2,000	1	5 00			100
13 50	594 00		594 00	450				130	6 00			1	5 00			150
15 00	780 00		780 00	425	1,400			300			7,500	4	35 00			2,800
13 50	648 00		648 00	420	1,500	940	75					1	5 00			650
10 00	421 20		421 20	421					8 00			1	5 00			150
15 00	780 00		780 00	600	1,000			130						14		1,200
15 00	780 00		780 00	780					10 50		2,000			10	50	600
16 50	868 00		868 00	868					10 00					25		1,000
12 00	576 00		576 00	576					10 00		3,000	1	15 00			700

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machinist.	30	U. S.	U. S.	m	1	1			2	48		no work
Brass finisher.	27	"	Ireland	m					1	29	13	sick and no work
Brass worker.	23	Germany	Germany	m					1	52		
Tool maker.	33	Canada	Canada	m					1	52		
Laborer	60	Ireland	Ireland	m					1	52		
Machinist.	43	Canada	Canada	m	3	3	2		4	50	2	no work
"	39	Scotland.	Ireland	m	7	7	5		8	47	5	"
"	25	U. S.	U. S.	m	1	1			2	52		
"	40	"	Ireland	m	3	3	2		4	52		
"	30	Canada	Ireland	m	2	2		1	4	52		
"	47	Scotland	Scotland	m	7	4	3		5	51	1	not ans.
Machine hand	27	U. S.	Ireland	m					1	52		
Laborer	43	Ireland	"	m	4	4	2		5	52		
Vise hand	24	U. S.	U. S.	m	1	1			2	50	2	no work
"	44	England.	England	m	9	9	4		10	52		
Machinist	37	"	"	m	6	6	3		7	50	2	no work
Laborer	35	Ireland	Ireland	m	3	3			4	50	2	"
Core maker.	33	U. S.	U. S.	m	2	2	1		3	34	18	"
Laborer	42	Ireland	Ireland	m					1	50	2	"
Tester	28	U. S.	U. S.	m					1	51	1	not ans.
Brass molder.	21	Canada	Ireland	m				4	4	52		
Machinist	27	U. S.	"	m				1	1	52		
Molder	25	"	"	m				2	2	48	4	no work
"	25	"	U. S.	m				6	6	52		
Brass molder.	20	"	Ireland	m						49	3	no work
"	27	"	"	m				4	4	52		
"	17	"	U. S.	m						52		
"	25	"	"	m						52		
Core maker.	22	Ireland	Ireland	m						50	2	no work
"	25	U. S.	"	m						52		
"	16	England	England	m						50	2	not ans.
Helper	33	Canada	Ireland	m						52		
Molder	30	Ireland	"	m						52		
Laborer	30	"	"	m						52		
Molder	28	U. S.	U. S.	m						52		
Brass finisher	19	"	"	m						47	5	not ans.
"	24	"	Ireland	m						26	26	no work
"	22	"	"	m						48	4	"
"	21	"	"	m						50	2	"
Laborer	14	"	"	m						5		first work
Brass finisher	22	"	"	m						44	8	no work
"	19	"	"	m						48	4	sickness
Laborer	24	"	"	m						39	13	no work
Brass finisher	18	"	"	m						52		
"	22	"	France.	m						52		
Molder	22	Ireland	Ireland	m						46	6	no work
Machinist	21	"	"	m						52		
"	23	"	"	m				1	1	52		
"	22	U. S.	"	m						50	2	laid off
"	25	"	"	m				1	1	50	2	no work
Laborer.	28	Ireland	"	m						48	4	"
Grinder.	17	U. S.	U. S.	m						44	8	"
Machine hand	17	"	Ireland	m						52		
Machinist.	32	"	"	m				1	1	39	13	sickness
Laborer	17	"	Scotland	m						34	18	no work

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.		Total annual income.	Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.			If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$12 00	\$576 00		\$576 00	\$450	\$900	\$400	\$100								\$350
10 50	409 50		409 50	409					\$10 00					18	125
10 50	546 00		546 00	546					7 00		\$1,000			9	250
15 00	720 00		720 00	720					12 00					45	400
7 50	390 00		390 00	290				\$100	8 00					44	400
10 50	525 00		525 00	525					8 00					28	500
12 00	564 00		564 00	564					7 00		700	1	\$4 50	4	100
10 50	546 00		546 00	546					10 00					40	800
24 00	1248 00		1,248 00	1,248					12 00		2,000				900
13 50	702 00		702 00	702					10 50		1,000	1	25 00	11	300
10 50	535 50		535 50	535					12 00		2,000	1	5 00	32	850
9 00	468 00		468 00	468					9 00						650
7 50	390 00		390 00	390					7 00					20	300
10 50	525 00		525 00	250	800	425	275								1,100
10 50	546 00	\$250	796 00	796					8 75		2,000			9	150
15 00	750 00		750 00	870				50	6 00			1	5 00	3	700
7 50	375 00		375 00	375					8 00					12	200
12 00	406 00	140	546 00	325	3,300		200				2,000	1	5 00		6,500
7 50	375 00		375 00	375	2,500						2,000			33	3,500
10 50	535 50		535 50							\$8 00					70
12 00	624 00		624 00	624					+++					20	50
13 50	702 00		702 00	702					+++		2,000	1	5 00		400
13 50	648 00		648 00	648	1,500							1	5 00		2,500
12 00	624 00		624 00	624					10 00			1	5 00		50
10 00	490 00		490 00							4 00					50
12 00	624 00		624 00							4 00					200
7 50	390 00		390 00					40		3 50					
12 00	624 00		624 00							4 50		1	7 50		300
10 50	525 00		525 00							†				19	125
6 00	312 00		312 00							3 50					100
3 50	175 00		175 00					*		*				9	
9 00	468 00		468 00							4 00	2,000	1	10 00	30	450
7 50	390 00		390 00					50		3 50				2	100
7 50	390 00		390 00							3 50				24	40
12 00	624 00	20	644 00				200		free			1	5 00		800
10 00	470 00		470 00					300							500
12 00	312 00		312 00							4 00					50
12 00	576 00		576 00							5 00					225
15 00	750 00		750 00							5 00					300
2 50	12 50		12 50					*		*					
7 50	390 00		390 00							3 50					75
4 00	192 00		192 00							3 00					45
7 50	392 50		392 50							3 50					100
4 00	208 00		208 00					*		*					
13 50	702 00		702 00							3 50					250
12 00	552 00		552 00							6 00		1	5 00	8	150
9 00	468 00		468 00					100		4 00				14	300
10 00	520 00		520 00							4 00		1	5 00	4	50
12 00	600 00		600 00							5 50					100
12 00	600 00		600 00							6 00					100
7 50	390 00		390 00							4 00		1	4 00	23	100
3 50	154 00		154 00							3 50					
5 00	260 00		260 00					*		*					
12 00	468 00		468 00							3 50					250
3 00	102 00		102 00					*		*					

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Vise hand	24	U. S.	Ireland	s						52		
Machinist	20	"	"	s						50	2	no work
"	19	"	"	s				1	1	52		
"	24	Canada	Scotland	s						52		
"	19	"	England	s						52		
Laborer	19	U. S.	Ireland	s						52		
"	28	Ireland	"	s						44		first work in U. S.
Core maker	19	U. S.	England	s						46	6	no work
"	17	"	U. S.	s						26	26	"
Laborer	27	"	"	s						49	3	"
Core maker	18	Ireland	Ireland	s						52		
Brass molder	19	U. S.	U. S.	s						52		
"	24	"	Ireland	s						34	18	no work
"	17	Canada	U. S.	s						46	6	"
Laborer	17	U. S.	Ireland	s						26		first work
"	16	Ireland	"	s						52		
Brass molder	23	U. S.	"	s						52		
DETROIT RADIATOR CO.												
Core maker	45	England	England	m	3	3	1		4	50	2	sick
Foreman	52	Ireland	Ireland	m	8	7	2		8	44	8	"
Molder	26	U. S.	Germany	m	5	5	8	1	7	45	7	sickness and shut down
Foreman	31	"	U. S.	m	2	2	2		2	52		
Molder	29	"	England	m	3	3	1		4	52		
"	29	"	U. S.	m	2	2			2	52		
"	30	"	England	m	2	2			1	49	3	laid off and no work
"	29	Germany	Germany	m	2	2		1	4	49	8	laid off
Core maker	28	"	"	m	2	2			3	35	17	no work
"	23	"	"	m	1	1			1	49	3	"
"	25	U. S.	"	m	3	3			4	26	26	"
Laborer	24	Germany	"	m	1	1			1	44	8	"
Molder	29	U. S.	U. S.	m				1	2	54	2	sick and laid off
"	24	Germany	Germany	m	1	1			2	36	17	no work
Laborer	31	Canada	Canada	m	3	3	2		4	48	4	sick
Molder	30	U. S.	U. S.	m	2	2	1		3	45	4	no work
"	30	Scotland	Ireland	m	1	1			2	49	3	"
"	43	U. S.	"	m	4	4	3		5	48	4	sickness
"	25	Canada	England	m	1	1			2	48	4	no work
"	26	Germany	Germany	m	2	2			3	48	4	"
"	32	U. S.	Ireland	m	3	3	1		4	44	8	no work
"	28	"	Germany	m	3	3			4	46	6	burnt
"	29	"	"	wr	1	1		1	1	46	6	sickness
"	39	Canada	Ireland	m	2	2	1		3	35	17	no work
"	28	Germany	Germany	m	1	1			2	36	16	"
"	28	U. S.	Ireland	wr	2	2	1		2	44	8	"
Laborer	32	Germany	Germany	m	2	2			3	36	18	"
"	45	"	"	m	8	4	1		5	39	18	"
"	36	"	"	m	3	3			4	46	6	"
"	46	"	"	m	1	1	1		2	26	26	"
"	45	"	"	m	2	2	1		3	44	8	"
Machine hand	32	"	"	m	3	3			4	22	30	sick
"	35	"	"	m	2	2			3	52		
Laborer	47	"	"	m	2	2	1		3	32		
"	41	Canada	England	m	5	5	2		8	26	26	hurt and no work
"	39	U. S.	U. S.	m	2	2	2		3	48	4	no work
"												sick and no work

EIGHTH ANNUAL REPORT

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TABLE No. 1.—*Showing Individual Reports.*

Income.				Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.	
\$2 00	\$468 00		\$468 00							\$3 50				\$200
7 50	375 00		375 00							4 00				40
6 00	312 00		312 00							4 00				40
12 00	624 00		624 00					*		*				100
4 00	208 00		208 00					*		*				35
7 50	390 00		390 00							3 50				25
9 00	396 00		396 00					\$100		3 50				150
10 50	483 00		483 00					*		*	\$100		10 mo	300
4 00	104 00		104 00					*		*				
4 00	196 00		196 00							3 50				25
6 00	312 00		312 00							3 50			7	
6 00	312 00		312 00					*		*				30
12 00	408 00		408 00					*		4 00				150
4 00	184 00		184 00					*		*				
2 50	65 00		65 00					*		2 00			16	
3 00	156 00		156 00							5 00			7	
15 00	740 00		740 00					100						200
12 00	600 00	\$250	850 00	\$850					\$7 50		1500		14	960
15 00	690 00	200	890 00	890					10 00		2000	1	\$5 00	32
13 50	607 50	38	645 50	550	\$1800	\$200	\$75							700
18 00	936 00		936 00	730				200	10 00		500	1	5 00	2000
15 00	780 00	120	900 00	900	1200							1	5 00	850
14 50	754 00		754 00	754					8 00		225			3000
15 00	735 00		735 00	720				15	9 00			1	5 00	650
15 00	735 00		735 00	640	1500	500	50				2000	1	10 00	800
9 00	315 00		315 00	315	800									1500
10 50	514 50		514 50	464				50	5 50					900
18 00	338 00		338 00	338					6 00					300
7 50	330 00		330 00	225				100	3 00			1	5 00	350
13 50	675 00	100	775 00	350	2100	700	400		4 50		2100	2	10 00	500
12 00	420 00		420 00	420					6 00		100	1	5 00	1700
7 50	390 00		390 00	390										100
15 00	720 00		720 00	720					7 00					200
14 00	696 00		696 00	696							1000	1	5 00	400
15 00	720 00	200	920 00	715				200	10 00			1	5 00	200
15 00	720 00		720 00	520				200	10 00					800
14 50	696 00		696 00	596				300	free					700
14 00	616 00		616 00	580				50	6 00			1	5 00	450
13 00	596 00		596 00	596					4 00			1	5 00	400
14 50	667 00		667 00	667					5 00					100
12 00	420 00		420 00	420					8 00			1	5 00	60
12 00	432 00		432 00	432					5 00		56	2	10 00	900
12 50	550 00		550 00	550					4 00					450
7 50	270 00		270 00	270					3 00					100
7 50	292 50		292 50	292					8 00			1	5 00	150
8 50	391 00		391 00	391	900	400								300
7 50	196 00		196 00	196	1500	950						1	3 00	200
7 50	330 00		330 00	330					3 00					1000
7 50	165 00		165 00	200	800	700					1000			250
8 10	421 20		421 20	370				50	3 00			1	4 00	300
7 50	240 00		240 00	240					4 00					300
7 50	196 00	75	270 00	220	1200	400	50		6 00					250
7 50	360 00		360 00	360										200

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	32	Germany	Germany	m	4	4			5	34		first work in U. S.
"	41	Ireland	Ireland	m					1	52		
"	42	England	England	m	10	5	1		9	51	1	no work
"	42	Canada	Ireland	m	2	2	1		4	32	20	"
"	17	U. S.	Germany	s						52		
"	13	"	"	s						52		
"	15	"	"	s						52		
"	20	"	Ireland	s						52		
"	16	"	Germany	s						52		
"	16	Canada	Canada	s						52		
"	16	U. S.	Ireland	s						52		
Core maker	19	U. S.	U. S.	s						52		
Laborer	17	"	England	s						26	26	no work
Molder	18	Canada	Canada	s						52		
"	28	Germany	Germany	s				2	2	39	13	no work
"	28	U. S.	U. S.	s				1	1	26	26	"
"	30	"	Ireland	s				3	3	22	30	"
Core maker	21	Ireland	"	s				2	2	35	17	"
"	21	Germany	Germany	s				1	1	52		
"	19	U. S.	Ireland	s						44	8	no work
Molder	28	"	"	s						48	4	"
"	24	"	Scotland	s						32	20	"
Metal melter	25	Canada	Canada	s						52		
Laborer	41	U. S.	Ireland	s						52		
Molder	29	U. S.	U. S.	s						50	2	no work
Core maker	18	Ireland	Ireland	s						51	1	"
"	26	U. S.	Germany	s						51	1	"
"	23	"	"	s						44	8	"
Laborer	20	"	Canada	s						52		
"	58	Ireland	Ireland	s						39		first work in U. S.
Molder	30	Germany	Germany	s						42	10	no work
"	22	"	"	s						48	4	"
"	24	U. S.	U. S.	s						39	13	"
"	27	"	England	s				1	1	44	8	"
"	23	Germany	Germany	s						39	13	"
Core maker	23	U. S.	U. S.	s				2	2	44	8	"
Machinist	23	England	England	s						48	4	"
"	19	"	"	s						52		
"	40	U. S.	Ireland	s						44	8	sickness
Laborer	22	Germany	Germany	s						52		
"	28	Ireland	Ireland	s				2	2	52		
"	34	"	"	s						42	10	no work
"	31	Switz.	Switz.	s						52		
"	18	U. S.	Ireland	s						52		
Machine hand	24	Germany	Germany	s						35	17	no work
Laborer	28	"	"	s						22	30	"
"	13	U. S.	Ireland	s						52		
Molder	28	"	"	s						50	2	laid off
"	37	England	England	m	2	2	1		3	32	20	no work
Laborer	54	Canada	U. S.	m	4	2		1	4	44	8	"
Pattern maker	27	U. S.	"	m					1	52		
Laborer	30	Germany	Germany	m	2	2			3	49	3	no work
Machinist	45	Belgium	Belgium	m	8	3	3		4	52		
"	51	England	England	m	6	2			7	39	13	no work
"	37	Germany	Germany	m	5	5	3		6	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on house.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$7 50	\$255 00		\$255 00	\$255					\$6 00						\$200
7 50	390 00		390 00	390	\$1500										2000
7 50	382 50		382 50	382					7 00		\$120				400
7 50	240 00		240 00	240					10 00					1	500
4 50	234 00		234 00					*		*					
3 00	156 00		156 00					*		*					
3 00	156 00		156 00					*		*					
7 50	390 00		390 00					*		*					50
6 00	312 00		312 00					*		*					
5 00	260 00		260 00					*		*			10		
6 00	312 00		312 00					*		*					
6 60	843 20		843 20					*		*					25
4 50	117 00		117 00					*		*					
3 50	182 00		182 00					*		*					
18 50	526 50		526 50	526						+		1	\$5 00	10	50
13 00	338 00		338 00	338						+		1	5 00		500
14 00	308 00		308 00	308						+		1	5 00		10
12 00	420 00		420 00	420						+		1	5 00	19	25
12 00	624 00		624 00	424				\$200		+				19	330
13 00	572 00		572 00							+	\$7 50				75
12 50	600 00		600 00					50		4 00					100
13 50	432 00		432 00					100		4 00					300
13 20	686 40		686 40							3 50				2%	40
8 00	416 00		416 00							5 00					500
15 00	750 00		750 00							4 00					25
6 00	306 00		306 00							3 50				4	
14 00	714 00		714 00							5 00	2000	1	5 00		175
8 50	374 00		374 00							3 50					75
6 00	312 00		312 00					50		3 50					100
7 50	292 50		292 50					50		3 50				10	200
18 50	567 00		567 00							4 00		1	4 00	8	80
12 00	576 00		576 00					100		3 50		1	5 00	21	250
18 50	526 50		526 50							4 00					50
12 00	528 00		528 00							8 00		1	5 00		75
12 00	468 00		468 00					125		3 00	100	1	5 00	10	250
18 00	572 00		572 00							9 00					75
15 00	720 00		720 00					390		3 50				18	700
7 50	390 00		390 00							3 50				3	75
7 50	330 00	\$100	430 00					100		3 50					4500
7 50	390 00		390 00					100		3 25				1%	150
7 50	390 00		390 00					75		3 50				3	100
7 50	315 00		315 00							3 50				6	20
7 50	390 00		390 00					100		3 50				26	150
7 50	390 00		390 00							3 50					100
9 00	315 00		315 00							3 50	300	1	5 00	6	50
7 50	165 00		165 00							3 75				1%	20
4 50	234 00		234 00							2 00					
18 50	675 00		675 00							5 00	100	1	5 00		250
14 50	464 00		464 00	464					10 00					25	600
7 50	330 00		330 00	330	2200	\$1100									1800
14 25	741 00		741 00	741						10 00					500
7 50	367 50		367 50	367					4 50		1500			6	10
16 50	858 00		858 00	475	3500			350			4000			35	5000
12 00	468 00	60	528 00	528	3000						1000			18	3200
15 00	780 00		780 00	780	1400	1000					500	2	10 00	7	500

*Lives at home and gives wages to parents.

†Lives at home and supports family.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Laborer	48	Ireland	Ireland	wr	6	1			1	52		
Finisher	34	U. S.	U. S.	m	1				1	47	5	sickness
Laborer	40	Germany	Germany	m	5	5	2		6	52		
Pattern maker	31	"	"	m	2	2			3	50	12	no work
Molder	29	U. S.	"	m	1	1			2	44	8	"
Laborer	38	Germany	"	m	6	6	4		7	52		
DETROIT SHEET METAL AND BRASS WORKS.												
Book-keeper	39	Canada	Scotland	m					1	52		
Machine hand	34	U. S.	France	m	4	4	2		5	52		
Iron worker	35	"	Germany	m	4	4			5	46	6	sickness
Silver plater	50	Germany	"	m					1	52		
"	39	U. S.	"	m	3	3	3		4	39	13	no work
Metal polisher	31	England	England	m	1	1			2	34	18	"
"	33	"	"	m	2	2			3	30	22	"
Vise hand	24	Germany	Germany	m	2	2			3	52		
Brass finisher	31	"	"	m	3	3			4	52		
"	34	"	"	m	5	5	2		6	52		
"	37	U. S.	Ireland	m	1	1			1	34	18	no work
"	27	England	England	m	1	1			2	52		
Metal worker	54	U. S.	U. S.	m	3	1	1		2	26	26	no work
Brass finisher	32	Germany	Germany	m	2	2			3	52		
Pattern maker	19	England	England	m	1	1			2	52		
Tinsmith	48	Germany	Germany	m	6	5	1		6	48	4	sickness
Metal polisher	47	"	"	m	4	3			4	52		
Pattern maker	48	U. S.	U. S.	m	1	1	1		2	52		
Machinist	25	"	Germany	m	1	1			2	52		
Locksmith	32	Germany	"	m	1	1		1	3	44	8	no work
Brass finisher	49	"	"	m	4				1	52		
Locksmith	28	U. S.	"	m	2	2			3	52		
Blacksmith	48	Scotland	Scotland	m	5	5	3		6	52		
Iron worker	52	Canada	Canada	m	2				1	39	13	sickness
Molder	24	U. S.	Germany	m	1	1			2	52		
Iron worker	28	"	"	m					1	52		
"	45	Sweden	Sweden	m	6	6	3		7	52		
Metal worker	54	Germany	Germany	m	4	4			5	52		
Brass spinner	27	"	"	m					1	52		
Melter	60	"	"	m	8	4	2		5	52		
Coppersmith	31	"	"	m	4	4	1	1	6	49	3	laid off
Photographer	38	Canada	Ireland	m	5	5	1		6	39	13	no work
Finisher	25	Germany	Germany	s				1	1	44	8	"
Iron worker	25	"	"	s				1	1	52		
Laborer	23	Canada	Canada	s				2	2	52		
Helper	16	U. S.	Germany	s						13	39	sickness
Steam fitter	21	"	Ireland	s						52		
Helper	16	"	U. S.	s						52		
"	17	"	"	s						52		
"	18	"	"	s						52		
"	18	"	"	s						22	30	no work
Machine hand	15	"	Germany	s						44	8	"
Electro plater	24	England	England	s						52		
Iron worker	23	U. S.	Scotland	s			2	2	2	52		
Helper	15	"	U. S.	s						46	6	no work
"	16	"	"	s						44	8	"
"	15	Germany	Germany	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$390 00		\$390 00	\$390					\$3 50					\$25		\$75
10 00	470 00		470 00	\$70				\$100	10 00							700
7 50	390 00		390 00	275	\$1200	\$200	\$100					1	\$5 00	15	\$50	1800
15 00	750 00		750 00	550	1800	600	150							25		1600
12 00	528 00		528 00	425				100	6 00			1	4 00			400
7 50	390 00		390 00	275	1100	400	75				\$2000	1	5 00	16	50	1800
20 00	1040 00		1040 00	550				200	12 00		2000			5		1200
9 00	468 00	\$300	768 00	589	1500			200			2000					1700
12 00	552 00		552 00	368	1600	500	100		5 50		1000			8		400
9 00	468 00		468 00													1800
10 50	409 50		409 50	409					7 00		2000					1000
12 00	408 00		408 00	408					15 00					18		250
7 50	225 00		225 00	225					8 00			3	10 00	14		500
8 00	416 00		416 00	875				25	6 00		300	2	20 00	10		200
10 00	520 00		520 00	520	1200	1000								9		500
11 50	598 00		598 00	420	1800	1000	100							8		900
15 00	510 00		510 00	510	400				10 00							500
15 00	780 00		780 00	780					10 00					21		250
15 00	390 00		390 00	390					17 00							2000
9 00	468 00		468 00	468	1700	700								17		1100
12 50	702 00		702 00	675				25	7 50					1%	80	200
12 00	576 00		576 00	576					8 00					48		400
12 00	824 00	300	924 00	924					10 00					18		500
16 09	780 00		780 00	560				200	15 00							2000
15 00	780 00		780 00	580				200	6 00							300
9 00	396 00		396 00	396	1000	200			7 00			1	5 00	27	600	900
12 00	624 00		624 00	624					7 00							250
9 00	468 00		468 00	468					10 00		2000	1	5 00	12	50	400
12 00	624 00		624 00	624					12 00			1	5 00	29		200
15 00	565 00		565 00	565												350
16 50	858 00		858 00	858					10 00							800
10 50	546 00		546 00	500				40	6 50							150
9 00	468 00	250	718 00	700	2500		15				2000	1	5 00	22		3500
7 50	390 00	400	790 00	790					12 00		1000	1	5 00	10		450
12 50	702 00		702 00	550	1100	500	150					1	5 00	9	100	1100
7 50	390 00	300	690 00	525	1800	900	100							8	800	1500
15 00	785 00		785 00	735					7 00		1700	1	10 00	5	50	200
9 00	351 00		351 00	351					9 00					2	100	150
10 50	462 00		462 00	462					+			1	5 00	10		800
10 50	546 00		546 00	546					+			1	5 00	9		50
10 50	546 00		546 00	546					+			1	5 00	23		500
4 00	52 00		52 00							\$4 00						
15 00	780 00		780 00					80	4 50							100
5 00	260 00		260 00					75	3 50		200					100
3 50	182 00		182 00					*								
4 50	234 00		234 00					*								
5 00	110 00		110 00					*		3 50						
4 00	176 00		176 00					*								
16 50	858 00		858 00							5 00				6		100
18 50	702 00		702 00							6 00						850
2 50	115 00		115 00					*								
3 60	158 40		158 40					*								
3 00	156 00		156 00					*								

* Lives at home and gives wages to parents.

‡ Lives at home and supports family.

TABLE No. 1—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Helper	17	Poland	Poland	s						52		
Metal polisher	20	Germany	Germany	s						45	4	no work
	32	U. S.	Ireland	s						45	5	"
Brass finisher	28	Germany	Germany	s						39	18	sickness
Helper	18	U. S.	U. S.	s						52		
Steam fitter	27	"	Ireland	s						52		
Metal polisher	21	Poland	Poland	s						52		
	22	England	England	s						30	22	no work
Brass finisher	21	U. S.	Germany	s				1	1	26	26	"
	21	"	U. S.	s						52		
"	17	"	Germany	s						52		
"	19	"	"	s						26	26	no work
Tinsmith	26	Canada	U. S.	s						39	13	"
Helper	15	Poland	Poland	s						52		
Metal worker	34	Germany	Germany	s						43	9	no work
Helper	15	"	"	s						52		
"	19	U. S.	"	s						52		
"	20	"	U. S.	s						52		
Steam fitter	21	"	"	s						52		
Coppersmith	32	"	Germany	s						52		
Helper	18	"	Italy	s						52		
Steam fitter	19	"	Germany	s						45	7	no work
Helper	18	"	"	s						52		
Blacksmith	21	"	"	s						52		
Helper	16	"	Ireland	s						52		
"	18	Scotland	Scotland	s						26	26	no work
Sheet iron worker	19	U. S.	U. S.	s						52		
Helper	19	"	"	s						52		
Plumber	18	Canada	"	s						46	6	no work
Helper	15	"	Scotland	s						39	13	"
Brass molder	22	U. S.	England	s						39	13	"
Brass spinner	18	"	Sweden	s						26	26	"
Brass finisher	20	"	England	s						43	4	"
Brass molder	21	Canada	U. S.	s						26	26	a strike
Book-keeper	20	U. S.	Germany	s						52		
"	34	Scotland	Scotland	s						52		
Brass molder	24	U. S.	Canada	s						30	22	no work
"	20	Canada	Germany	s						39	13	a strike
Helper	18	U. S.	"	s						52		
Core maker	17	Poland	Poland	s						45	4	no work
"	19	Germany	Germany	s						52		
Brass molder	21	U. S.	U. S.	s						52		
Brass finisher	20	"	"	s						52		
Sheet iron worker	24	"	"	s						52		
Machine hand	16	Germany	Germany	s						44	8	no work
Shipping clerk	20	U. S.	"	s						52		
Plumber	24	Scotland	Scotland	s				1	1	52		
										34	18	no work
FRONTIER IRON AND BRASS WORKS.												
Pattern maker	17	Germany	Germany	s						52		
Machinist	18	Canada	Canada	s						52		
Brass finisher	16	"	England	s						52		
Laborer	18	"	Canada	s						52		
Machinist	18	U. S.	Scotland	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$3 60	\$187 20		\$187 20					*		\$4 00				8		\$10
9 00	433 00		433 00							4 00				100		100
10 50	438 00		438 00							4 00				7	\$50	50
9 00	351 00		351 00							4 00						
6 00	312 00		312 00							4 00						
18 50	702 00		702 00					\$50		5 00						150
10 50	546 00		546 00					30		4 00		1	\$4 00	11		100
9 60	288 00		288 00					25		†				20		300
9 00	284 00		284 00							3 50						75
7 50	890 00	\$110	500 00					100		3 50						1000
7 50	390 00		390 00					70		free						200
10 50	273 00		273 00							3 00						310
10 50	409 50		409 50							5 00	\$2000	1	5 00	25		100
3 00	156 00		156 00					*		4 00				9		
9 60	412 80		412 80							4 00				2 1/4	60	25
4 20	218 40		218 40					*		*				8		
5 00	260 00		260 00					*		*						45
4 50	284 00		284 00					*		*						50
15 00	780 00		780 00							3 50						50
16 50	858 00		858 00					100		5 00						800
4 50	284 00		284 00					*		*						
4 50	202 50		202 50					*		*						100
4 50	284 00		284 00					*		*						
7 50	390 00		390 00					*		*						75
3 00	156 00		156 00					*		*						
3 50	91 00		91 00					*		*				8		
6 00	312 00		312 00					*		*						200
5 00	260 00		260 00					70		2 00		1	3 00			100
8 00	368 00		368 00					25		4 00	1000			15		200
3 00	117 00		117 00					*		*				3		
13 50	526 50		526 50					*		6 50						150
4 50	117 00		117 00					*		*						
6 00	288 00		288 00					*		*		1	5 00			25
9 00	284 00		284 00							4 00				11		100
15 00	780 00		780 00							6 00						100
14 00	728 00		728 00							7 00				19		150
13 50	405 00		405 00					50		4 00				14		75
9 00	351 00		351 00					*		*						100
4 00	208 00		208 00					*		*						
3 50	168 00		168 00					*		*				8		
4 00	208 00		208 00					*		*		1	5 00			35
14 00	728 00		728 00							4 00						450
14 50	754 00		754 00					100		6 00						175
10 50	546 00		546 00							5 00						50
3 30	145 20		145 20					*		*				8		
12 00	624 00		624 00							6 00						200
6 00	312 00		312 00							3 00						800
16 00	544 00		544 00							5 00				20		100
4 50	284 00		284 00					*		*				7		
4 50	284 00		284 00					25		†				2		150
3 00	156 00		156 00					*		*				6		
4 50	284 00		284 00					*		*				10		
4 50	284 00		284 00					20		†						

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	17	U. S.	England	s						52		
Molder	17	Germany	Germany	s						52		
Laborer	17	"	"	s						52		
"	16	U. S.	U. S.	s						52		first work in U. S.
Machinist	20	"	"	s						52		
"	24	Canada	Scotland	s				1	1	44	8	no work
"	20	Switz.	Switz.	s				1	1	52		
Pattern maker	26	U. S.	England	s				2	2	50	2	sickness
Machinist	23	Germany	Germany	s				1	1	29	15	no work
Pattern maker	20	U. S.	"	s						52		
Machinist	20	"	U. S.	s						49	3	laid off
Laborer	44	Ireland	Ireland	s				2	2	44	8	no work
"	27	Germany	Germany	s						52		
Molder	28	England	England	s						52		
Core maker	26	U. S.	Ireland	s						52		
Molder	24	"	U. S.	s						26	26	no work
Blacksmith	31	Scotland	Scotland	s						30	22	"
Mechanical engineer	27	U. S.	England	s						52		
Machinist	24	"	Scotland	s						52		
"	24	"	U. S.	s						48	4	no work
Laborer	18	Canada	Scotland	s						52		
Machine hand	18	U. S.	U. S.	s						26	26	no work
Machinist	24	"	Scotland	s						46	6	"
"	25	England	England	s						52		
"	22	Scotland	Scotland	s						52		
Brass molder	31	U. S.	Germany	s				1	1	40	12	no work
Core maker	18	Germany	"	s						52		
Machinist	20	U. S.	Canada	s						49	3	sick
"	21	"	Germany	s						52		
Laborer	32	Germany	"	m	2	3			3	52		
"	33	"	"	m	3	3			4	46	6	no work
Machinist	26	"	"	m	5	9	2		6	52		
Laborer	26	"	"	m	1	1		1	3	52		
Foreman	37	"	"	m					1	53		
Blacksmith	32	U. S.	"	m	3	3	1		4	52		
Molder	30	"	"	m	1	1	1		2	52		
Laborer	34	Germany	"	m	1	1		1	3	26	26	no work
Melter	70	Ireland	Ireland	wr	8					52		
Laborer	28	Germany	Germany	m	1	1			2	52		
Blacksmith	61	"	"	m	3	3			4	38	14	trip to Europe
Laborer	31	"	"	m					1	53		
Machinist	38	Canada	Canada	m	6	6	4		7	52		
Laborer	34	Germany	Germany	m					1	46	4	no work
Blacksmith	42	"	"	m	3	3	1		4	26	26	"
"	33	"	"	m	1	1			2	52		
" helper	32	"	"	m	3	3	2		4	52		
"	30	"	"	m	1	1			2	52		
Foreman	45	"	"	m	6	6	4		7	52		
Molder	47	"	"	m	4	3			4	52		
Core maker	52	Ireland	Ireland	m	2	1		1	3	52		
Laborer	43	"	"	m	1	1	1		2	52		
Core maker	30	Canada	Canada	m	2	2			3	50	2	no work
Laborer	57	Germany	Germany	m	6	4	2		5	26	26	"
Molder	40	England	England	m	4	4	3		5	52		
"	62	Canada	Scotland	m	6				1	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$3 00	\$156 00		\$156 00													
3 00	156 00		156 00													
3 00	89 00		89 00													
4 50	234 00		234 00													
7 50	330 00		330 00	\$330												
14 50	754 00		754 00	554				\$200								750
6 00	300 00		300 00	300												23
15 00	566 00	\$25	610 00	610												1300
13 50	702 00		702 00	702												100
15 00	780 00		780 00													300
13 50	661 50		661 50					50		3 50						400
7 50	330 00		330 00	330					\$8 50		\$2000					180
7 50	390 00		390 00					50		3 50						150
15 00	780 00		780 00							3 75						100
10 50	546 00		546 00					150		4 00		1	5 00	9	\$150	700
15 00	390 00		390 00							5 00		1	5 00			75
9 00	270 00		270 00							3 75						70
18 00	986 00		986 00					500		5 00		1	5 00			1500
13 50	702 00		702 00					50		5 00						600
13 50	648 00		648 00							4 00						125
7 50	390 00		390 00					75		4 50						125
8 00	78 00		78 00							3 00						
12 00	552 00		552 00					100		2 00		1	6 00			300
7 50	390 00		390 00							5 00						75
13 50	702 00		702 00							4 50		1	8 00	10	400	650
15 00	800 00		800 00	240	\$1800			200			2000	2	9 00			2000
6 00	312 00		312 00							3 00						
6 00	294 00		294 00							4 00						75
7 50	390 00		390 00					150		8 50						250
7 50	390 00		390 00	260	1000	\$800	\$75							6	10	400
7 50	345 00		345 00	345					8 00			1	4 00	8	15	300
13 50	702 00		702 00	500	1600	300	175				1000			18		1700
7 50	390 00		390 00	390					3 00					2		300
30 00	1560 00		1560 00	1200				300	10 00			1	5 00	11		600
9 00	468 00		468 00						5 00		144					50
15 00	780 00		780 00	780					8 00			1	5 00			300
7 50	195 00		195 00	225	850	500								9		600
12 00	624 00		624 00					100		5 00	100			48		200
7 50	390 00		390 00	315				75	8 00			1	5 00	6	10	700
14 00	532 00		532 00	582	800							1	10 00	38	25	1200
9 00	468 00		468 00	468	1000									9		1200
15 00	780 00		780 00	780					12 50					10		700
9 00	432 00		432 00	432					10 00					20		300
15 00	390 00		390 00	390	850	400						1	5 00	22		650
9 00	468 00		468 00	400	1500			50						13		2500
9 00	468 00		468 00	350	1000		100				1000	1	5 00	8	200	1300
9 00	468 00		468 00	468					4 00		200	1	7 00	9		300
22 50	1170 00	300	1470 00	960	5000			500			2000	2	15 00	21		8000
15 00	780 00	200	980 00	775	1000	300		150			2000			8		1000
12 00	624 00	150	774 00	550	1500			200			2000	1	5 00	30	15	3000
10 00	520 00		520 00	520	1500									28		2000
9 00	450 00		450 00	450					10 00					8	100	300
7 50	195 00	300	495 00	395	1800			100						23		2000
16 50	858 00	150	1008 00	750	1300		200				4000	1	10 00	12	250	1800
16 50	858 00		858 00	858	1800	500						1	4 00	56		1300

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 1. - CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	26	Canada	Scotland	m	1	1			2	52		
Machinist	35	U. S.	Germany	m	3	3	3		4	44	8	sickness
Blacksmith	35	Germany	"	m	1	1			1	39	13	no work
Laborer	28	"	"	m	3	3			4	52		
	27	"	"	m	1	1			1	52		
Pattern maker	28	England	England	m	1	1			2	48	4	no work
"	57	Canada	Canada	m	6	3	1		4	52		
"	30	England	England	m	3	3			4	52		
Millwright	52	Canada	Canada	m	2	2			3	42	10	sick and no work
"	30	U. S.	U. S.	m	2	2			3	52		
Machine head	30	"	"	m	1	1		1	3	52		
Machinist	26	"	"	m	1	1			2	39	13	no work
Brass finisher	30	Canada	Ireland	m	1	1			2	52		
Foreman	70	Germany	Germany	m	4	2			3	44	8	no work
Machinist	30	Canada	Canada	m	1	1			1	52		
"	53	England	England	m	7	4	1		5	52		
Laborer	45	Germany	Germany	m	2	2			3	35	17	no work
Machinist	58	France	France	w'r	1	1			1	39	13	" "
"	23	Switz.	Switz.	m	1	1			1	52		
Laborer	40	U. S.	France	m	2	2			3	52		
Machinist	33	Germany	Germany	m	1	1			2	52		
"	33	U. S.	France	m	2	2			3	52		
"	42	Scotland	Scotland	m	2	2	1		3	52		
"	36	"	"	m	6	6	4		7	52		
Engineer	28	England	England	m	3	3			4	35	17	no work
Machinist	46	France	France	m				1	2	52		
"	29	Ireland	Ireland	m					1	52		
"	34	Germany	Germany	m	2	2	1		3	52		
Foreman	36	England	England	m	4	4	3		5	52		
"	59	U. S.	U. S.	m	4	4			1	52		
Machinist	32	"	Scotland	m	3	3			4	52		
Laborer	56	Germany	Germany	m	3	3			4	44	8	sickness
Machinist	33	"	"	m	6	6	3		7	43	9	no work
"	36	Canada	England	m	1	1	1		2	23	29	sickness
"	50	England	"	m	1	1			1	52		
MICHIGAN MALLEABLE IRON CO.												
Laborer	39	Germany	Germany	m	3	3	1		4	52		
Molder	31	U. S.	U. S.	m	2	2		1	4	46	4	no work
"	27	"	"	m	1	1			2	50	2	" "
"	36	Germany	Germany	m	2	2			3	50	2	" "
"	28	"	"	m	1	1			1	47	5	burnt
Molder helper	27	U. S.	U. S.	m	3	3			4	49	3	no work
Laborer	40	Germany	Germany	m	5	5	1		6	49	3	" "
Molder	31	"	"	m	3	3			4	52		
"	25	"	"	m	5	5			6	52		
"	23	"	"	m	1	1			1	52		
"	20	U. S.	U. S.	m	1	1			2	17	35	burned
"	27	Ireland	Ireland	m	3	3	1		4	46	6	no work
"	29	U. S.	U. S.	m	1	1	1		2	39	13	" "
Molder helper	34	Germany	Germany	m	1	1			2	48	4	" "
Molder	27	"	"	m	2	2			3	48	4	sick and no work
"	39	"	"	m	3	3			4	49	3	no work
"	36	U. S.	Ireland	m	3	3	2		4	39	13	" "
"	40	Germany	Germany	m	1	1			2	42	10	" "

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt'n't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$780 00		\$780 00	\$780					\$10 00					6		\$100
15 00	660 00		660 00	660					12 00		\$4000			8		800
15 00	585 00		585 00	585	\$1200		\$200		6 00		1000			25		2000
18 50	702 00		702 00	702					3 50					7		300
7 00	864 00		864 00	864										8		250
15 00	720 00		720 00	720					7 50					8	\$200	600
18 00	936 00	\$1000	1936	900	3600	\$900	300	\$1000						10	100	9000
15 00	780 00	60	840	560	800	300	250							10	500	1000
12 00	504 00	848	852	750	900	650	50							2	35	850
12 00	624 00		624 00	400				200	7 00			1	\$5 00			700
7 50	390 00		390 00	390					9 00		2000					800
15 00	585 00		585 00	585					9 00		1000	1	4 00			400
16 50	858 00		858 00	858					10 00					5	350	1000
15 00	660 00		660 00	660	1800	400								29	15	1800
18 50	702 00		702 00	480	1800	900	200							22		780
15 00	780 00		780 00	700	2000			50			2000	1	3 00	11	3000	5000
7 50	262 50		262 50	262	400	300								17	300	350
15 90	620 10		620 10							\$4 00				20	100	200
13 50	702 00	75	777	777					13 50					19		2800
9 00	468 00		468 00	468					7 00							500
15 00	780 00		780 00	780	700									10		1000
25 00	1800 00	300	1800	770	2200		700				3000	1	5 00	17		2700
16 00	832 00		832 00	600	2000		200				2000			17	85	2500
15 00	780 00		780 00	780	500	100					2000	1	3 00	10	50	900
12 00	420 00		420 00	420					10 00					18		150
13 50	702 00	120	822	520	4000			300						8 1/4	400	5000
13 50	702 00		702 00	702					7 00					14		500
13 50	702 00		702 00	420	1800		60	200			2000	1	5 00	10		2300
21 00	1092 00		1092 00	870	2000		200				2000			14	350	2500
18 50	1014 00		1014 00	800	4000			200			2000			14		4200
13 50	702 00		702 00	550				150	10 00							600
7 50	330 00	144	474	474					6 00					39		200
12 00	516 00		516 00	516					8 00			1	5 00	2 1/2		400
9 00	207 00		207 00	207					12 00					20		450
15 00	780 00	170	950	650			200		13 00		8000	2	15 00	21	1500	2500
8 10	421 20		421 20	421	1200	400					2000	1	5 00	13		1000
9 50	456 00		456 00	456	600						1000	1	5 00			900
15 00	750 00		750 00	750					12 50							500
15 00	780 00		780 00	750	1000						200	1	5 00	9	50	1300
13 50	634 50		634 50	634					5 00					17		500
9 00	441 00		441 00	441					6 00							125
9 00	441 00		441 00	441					6 00		500	1	5 00	8		
9 00	468 00		468 00	468	800									8		900
10 50	546 00		546 00	546					6 00					4		500
12 00	624 00		624 00	624					7 00					22		150
11 00	187 00		187 00	187					12 00							100
7 50	345 00		345 00	345					5 00					9		250
12 00	468 00		468 00	468					8 00			1	5 00			300
9 00	432 00		432 00	400	800	780		25			1000	1	5 00	3 1/4	80	100
18 00	864 00		864 00	864					6 00		2000	1	5 00			600
11 43	580 07		580 07	580					10 00					9		650
11 00	429 00		429 00	429					9 00			1	5 00			200
10 00	420 00		420 00	420					10 00					6	50	650

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer.	30	Germany	Germany	m	13	2			3	48	4	no work
"	27	"	"	m	3	1	1		4	26	26	"
"	31	"	"	m	1	1			2	52		
Molder	32	U. S.	U. S.	m	1				1	52		
Laborer	48	Germany	Germany	m	3	2			3	52		
"	31	Canada	Canada	m	1	1			2	36	16	no work
Engineer	40	U. S.	England	wt	5	5	2		5	52		
Laborer	50	England	"	m	5	1	1		2	52		
Carpenter	34	Germany	Germany	m	2	2	1		3	22	30	no work
Pattern maker	57	Scotland	Scotland	m	4	2	1		3	52		
"	27	U. S.	Germany	m	2	2			3	26	26	no work
Laborer	42	Germany	"	m	5	5			6	52		
Molder	29	U. S.	"	m	1				1	25	17	laid off
"	29	"	"	wt	1	1			1	48	4	"
"	28	Denmark	Denmark	m	3	3			4	44	8	no work
"	38	Canada	U. S.	m	1	1			1	13	39	sickness
Laborer	36	Germany	Germany	m	3	3			4	25		first work in U. S.
Molder	41	France	France	m	4	4	1		5	52		
Laborer	50	Ireland	Ireland	m	6	4	1		5	48	4	no work
"	38	Germany	Germany	m	5	5	2	1	7	50	2	"
Molder	31	U. S.	U. S.	m	1	1			2	26	26	"
Laborer	40	Italy	Italy	m	3	3	3		4	52		
Fireman	38	Germany	Germany	m	3	3	1	1	5	52		
Laborer	53	"	"	wt	7	3	2		3	44	8	no work
"	44	"	"	m	6	6	2		7	52		
"	37	"	"	m	6	6	2		6	52		
Molder	33	"	"	m	2	2			3	47	5	no work
Laborer	35	"	"	m	3	3	1		4	40	12	"
"	32	Italy	Italy	m	5	5	2		6	42	10	"
Core maker	21	U. S.	Ireland	m	1	1			2	52		
Molder	24	England	England	m	2	2			3	49	4	no work
"	29	U. S.	Ireland	wt						39	13	"
"	24	"	"	s			2	2	3	31	21	"
"	25	"	U. S.	s			1	1	1	35	17	"
Laborer	23	Germany	Germany	s					26	26		"
Molder	26	U. S.	Ireland	s			2	2	46	6		"
"	26	Ireland	"	s					52			
"	22	U. S.	U. S.	s					33	14		no work
"	24	Germany	Germany	s			1	1	44	8		"
"	19	"	"	s					48	4		"
"	23	U. S.	"	s					26	26		"
Foreman	22	"	Scotland	s					52			
Molder	24	"	U. S.	s					52			
"	21	Germany	Germany	s					52			
"	23	U. S.	Ireland	s					35	17		no work
Laborer	22	"	"	s					52			
Machinist	23	"	"	s					26	26		no work
Laborer	24	England	England	s					26	26		"
Machinist	25	Canada	Ireland	s					49	3		"
Pattern maker	21	U. S.	Germany	s					52			
"	19	Canada	Canada	s			3	3	52			
"	25	U. S.	Germany	s			3	3	44	8		no work
Molder	20	"	Holland	s					44	8		burnt and no work
"	23	"	Germany	s					46	6		no work
"	21	"	"	s					50	2		sick

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
7 10	438 80		438 80	300	4800	4450	50	50						6	50	4550
9 40	218 40		218 40	218 40	218 40	218 40	1800	750						13		1300
9 00	468 00		468 00	468 00	418 900	325	50							7		600
10 00	520 00		520 00	460				60	7 00							150
8 40	438 80		438 80	438	500									8		600
7 00	288 00		288 00	288					3 50					4	100	100
12 50	1170 00		1170 00	1170					13 00							400
9 00	405 60		405 60	240	1000	600	120				80			11		900
9 00	198 00		198 00	198					10 00					17 1/2		200
13 50	702 00	200	902 00	375	2500		500				3000			18	100	3500
15 00	390 00		390 00	290				100	8 00							300
7 50	405 60		405 60	470	1100	500	200							28		1200
10 00	350 00		350 00	350					7 00							150
13 00	624 00		624 00							4 00	100	1	4 00			50
12 00	528 00		528 00	528					12 00					9	200	100
15 00	195 00		195 00	195					5 00			1	7 50			300
7 00	245 00		245 00	245					4 00					8 mo.	58	
16 00	832 00		832 00	832					10 00		400			17		500
9 00	432 00	250	682 00	682					7 00		2000	1	5 00	18	5	150
8 50	425 00		425 00	825	1150		100							9		1500
15 00	390 00	144	534 00	534	2000							1	6 00			3000
8 40	438 80		438 80	438								1	5 00	3	10	
9 00	468 00		468 00	468	1900	500			6 00			1	5 00	18		1500
8 40	399 60		399 60	399					4 00					1		25
8 40	438 80	300	738 00	738	1400	500								8	200	1800
8 40	438 80		438 80	438					5 00					2	50	150
11 00	517 00		517 00	390	1000	400	100							14		850
8 40	336 00		336 00	336	1000									9		1400
8 00	336 00		336 00	336	1200	900					50	1	5 00	10		300
9 00	468 00		468 00	528	900											1000
9 00	432 00		432 00	432	200									13		600
15 00	585 00		585 00						4 00			1	5 00			40
12 00	372 00		372 00						4 00							10
8 00	260 00		260 00						4 00							10
8 40	228 80		228 80						3 50					8	35	100
10 00	460 00		460 00						6 00			1	5 00			70
13 50	702 00		702 00					50	4 00					8	50	100
10 00	390 00		390 00						4 00							50
9 00	396 00		396 00					150	6 00		1000	1	5 00	7		200
10 00	480 00		480 00					50	8 25					4		150
12 00	312 00		312 00						4 50							75
15 00	780 00		780 00						5 00							25
12 00	624 00		624 00						4 00							40
12 00	624 00		624 00					300	3 00					9		400
12 00	420 00		420 00						4 00							10
11 00	572 00		572 00						4 00							200
15 50	403 00		403 00						5 00							60
7 00	182 00		182 00						4 00							10
14 00	646 00		646 00						4 50		3000	1	15 00	2 1/2		80
9 00	468 00		468 00						3 50					6		50
9 00	468 00		468 00						3 50					7		50
12 00	528 00		528 00						4 00							50
12 00	528 00		528 00					25	3 50							75
10 00	480 00		480 00						4 00							75
12 00	600 00		600 00					200	4 00			1	25 00			300

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Molder	29	U. S.	Ireland	s			1	1	39	13	no work
	30	"	Germany	s			1	1	31	21	
Core maker	23	"	Scotland	s					26	26	
"	23	"	Ireland	s			2	2	30	22	
"	17	"	Germany	s					35	17	
"	21	"	U. S.	s					52		
Laborer	34	Poland	Poland	s					52		
"	20	Italy	Italy	s					48	4	no work
Molder	23	U. S.	Germany	s					44	8	"
"	32	"	"	s					48	4	"
"	18	Germany	"	s					51	1	"
Core maker	17	U. S.	Ireland	s					26	26	
Laborer	15	Germany	Germany	s					33	20	not ans.
Pattern maker	17	U. S.	Canada	s					52		
Core maker	17	"	Ireland	s					44	8	no work
Laborer	18	"	Poland	s					52		
"	15	"	U. S.	s					52		
"	19	Germany	Germany	s			1	1	49	3	no work
"	17	"	"	s					52		
"	18	U. S.	"	s					52		
DETROIT MACHINE SREW WORKS.											
Machine hand	17	U. S.	"	s					52		
"	23	"	U. S.	s					52		
Laborer	25	Canada	Canada	s					52		
Machine hand	19	U. S.	Germany	s					52		
"	17	"	"	s					52		
"	17	"	"	s					52		
Bolt maker	19	Canada	Scotland	s					52		
Machine hand	15	U. S.	Germany	s					52		
Laborer	17	Germany	"	s					52		
Machine hand	16	U. S.	Canada	s					52		
"	16	"	Germany	s					39	13	no work
"	17	"	"	s					52		
"	16	Germany	"	s					52		
"	16	U. S.	"	s					39	13	no work
"	15	Canada	Ireland	s					52		
Laborer	16	U. S.	Germany	s					52		
Machine hand	15	"	"	s					44		first work
"	17	"	"	s					52		
"	19	"	"	s					52		
"	15	"	Canada	s					22		first work
"	16	"	Germany	s					52		
"	18	"	U. S.	s					52		
"	15	"	Canada	s					52		
"	15	"	"	s					52		
"	14	"	Germany	s					52		
"	15	"	"	s					52		
"	15	Germany	"	s					34		first work
"	16	"	"	s					26		"
"	15	U. S.	U. S.	s					13		"
"	16	"	Germany	s					39	13	not ans.
"	16	Canada	U. S.	s					47	5	no work
"	16	U. S.	Ireland	s					36		
"	16	Canada	Canada	s					49	3	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost, per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.	
\$8 00	\$312 00		\$312 00							\$5 00				\$250
12 00	372 00		372 00							4 00		1	\$5 00	16
7 00	182 00		182 00							3 00		1	5 00	30
9 00	270 00		270 00	\$270						4 00				
10 00	350 00		350 00							5 00				
10 00	520 00		520 00					\$150		3 00				450
8 00	416 00		416 00					200		3 00			3	450
7 00	296 00		296 00					100		4 00			3	250
10 00	440 00		440 00							4 00				50
12 00	576 00		576 00							4 00				100
8 00	408 00		408 00					*		*			9	
4 50	117 00		117 00					*		*				
4 50	144 00		144 00					*		*			10	
5 40	230 80		230 80					*		*				
5 00	220 00		220 00					*		*				
4 50	234 00		234 00					*		*				
3 00	156 00		156 00					*		*				
7 00	343 00		343 00	343				*		*			8	200
4 50	234 00		234 00					*		*			6	
5 00	260 00		260 00					*		*				
4 00	312 00		312 00							3 50				200
9 00	468 00		468 00							4 00				150
9 00	468 00		468 00							5 50			9	175
4 50	234 00		234 00					18		†				100
3 00	416 00		416 00					12		†				
8 60	187 20		187 20					*		*				
7 50	390 00		390 00					*		*	\$240	1	4 00	25
3 60	187 20		187 20					*		*				
3 00	156 00		156 00					*		*			7	
4 50	234 00		234 00					*		*				
3 60	140 40		140 40					*		*				
4 00	312 00		312 00					*		*				
8 60	187 20		187 20					*		*			1½	
3 60	140 40		140 40					*		*				
3 00	156 00		156 00					*		*			11	
3 00	156 00		156 00					*		*				
3 00	132 00		132 00					*		*				
9 00	468 00		468 00					*		*				
7 50	390 00		390 00					*		*				100
3 00	66 00		66 00					*		*				
3 60	187 20		187 20					*		*				
3 00	156 00		156 00					*		*				
3 00	156 00		156 00					*		*				
3 00	156 00		156 00					*		*				
3 00	156 00		156 00					*		*				
3 00	156 00		156 00					*		*				
3 00	102 00		102 00					*		*			6	
3 00	78 00		78 00					*		*			7	
3 00	39 00		39 00					*		*	110			
3 00	117 00		117 00					*		*				
3 00	141 00		141 00					*		*			10	
3 00	156 00		156 00					*		*				
3 60	176 40		176 40					*		*			10	

* Lives at home and gives wages to parents. † Lives at home and supports family.
† Lives at home and pays no stated amount for board.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machine hand	19	U. S.	Germany	s					39	13	no work	
"	16	Germany	"	s					52			
"	16	U. S.	U. S.	s					36	26	no work	
"	18	"	France	s					44	8	"	
"	15	"	Canada	s					36	36	"	
"	16	"	"	s					26	26	"	
"	17	"	France	s					50	2	sickness	
"	14	"	U. S.	s					10		first work	
Laborer	13	Germany	Germany	s					52			
Machinist	17	France	France	m	4	4	2		5	52		
"	21	U. S.	Germany	m	1	1			2	44	8	no work
"	45	Germany	"	m	5	3	2		4	52		
"	26	U. S.	"	m					1	52		
Laborer	26	"	U. S.	m	1	1			2	52		
Machinist	29	"	"	m	1	1			2	52		
Machine hand	30	"	Germany	m	2	2			3	52		
Machinist	36	"	U. S.	m					1	52		
Machine hand	26	Germany	Germany	m	1	1		2	4	52		
"	29	U. S.	"	m	2	2			3	52		
"	34	"	Ireland	m	3	3			4	52		
"	27	"	U. S.	m	2	2			3	49	3	laid off
Blacksmith	57	Germany	Germany	m	11	9	2		10	52		
Machinist	36	Canada	France	m					1	52		
Bolt maker	23	U. S.	Germany	m					1	52		
Bolt header	28	"	U. S.	m					1	52		
Engineer	27	"	Germany	m	1	1			2	52		
Machinist	28	"	U. S.	m				2	3	52		
Machine hand	19	Canada	Scotland	s				1	1	52		
"	15	U. S.	Germany	s						52		
Shipping clerk	20	"	U. S.	s				1	1	39	18	no work
Bolt maker	27	Canada	Canada	s						52		
Machinist	28	U. S.	Germany	s				2	2	52		
Machine hand	17	Canada	England	s						52		
"	18	U. S.	Belgium	s						52		
Polisher	25	"	Germany	s						52		
Machine hand	16	"	"	s						31	18	no work
"	18	Ireland	Ireland	s						44		first work in U. S.
"	29	Germany	Germany	s						52		
"	23	U. S.	"	s						52		
"	19	Germany	"	s						52		
"	20	"	"	s						52		
"	18	U. S.	"	s						52		
"	21	"	"	s						52		
"	18	"	"	s						52		
"	17	"	"	s						30	22	no work
Machinist	20	"	"	s						52		
Machine hand	19	"	"	s				1	1	52		
"	17	"	U. S.	s						44		first work
Machinist	17	Germany	Germany	s						52		
Bolt maker	18	Canada	England	s						44	5	no work
Machine hand	18	U. S.	Germany	s						48	4	"
JOHN BRENNAN & Co.												
Blacksmith	45	Germany	"	m	2	2	2		3	38		
Flanger	47	"	"	m	5	5	2		6	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
22	\$140 40		\$140 40					*		*						\$30
20	187 20		187 20					*		*						
20	78 00		78 00					*		*						
20	198 00		198 00					*		*	\$200					
20	78 00		78 00					*		*						
20	78 00		78 00					*		*						
20	225 00		225 00					*		*						
20	80 00		80 00					*		*						
20	187 20		187 20					*		*						
15	811 20		811 20	\$811	\$1800	\$700					2000			15		1200
12	528 00		528 00	528					\$6 00							400
15	780 00		780 00	700	1200	750		\$50			2500	1	\$5 00	8	\$300	1000
18	702 00		702 00	625				30	4 00		8000					800
9	468 00		468 00	468				125	8 00			1	5 00			800
18	998 00		998 00	750					10 00		3000	1	5 00			1000
12	624 00		624 00	475	1200	800	100									1500
18	998 00		998 00	600				800	free		2500	1	5 00			2000
9	468 00		468 00	468					7 00					18		300
9	494 00		494 00	494					8 00		2000	1	5 00			200
10	520 00		520 00	520	800											1200
9	441 00		441 00	441					8 00							100
12	624 00	\$650	1284 00	1274					10 00		8000			82	85	300
12	624 00		624 00	624					9 00					10	100	450
9	468 00		468 00	468					10 00							500
9	468 00		468 00	325	1000	650	100									800
15	780 00	156	936 00	375	2500	500	400	150			3000	1	15 00			2800
21	1092 00		1092 00	550	2500	1000	800									2200
9	468 00		468 00	468							2000	1	5 00	4		50
8	187 20		187 20							\$3 00						
10	390 00		390 00							4 00						75
9	468 00		468 00													
10	546 00		546 00							2 00				23		175
7	390 00		390 00							5 50						75
5	280 00		280 00					40		8 50				5		
10	546 00		546 00					60		3 00						1500
										4 50						150
6	204 00		204 00							3 00						
6	264 00		264 00							8 50				10 mo	7	75
7	364 00		364 00					17		3 50	190			6	12	20
7	360 00		360 00							3 50						45
6	312 00		312 00							3 00				18		50
7	360 00		360 00							3 00						
9	468 00		468 00							4 50				17		25
8	442 00		442 00					40		8 50						100
8	416 00		416 00					100		3 00		1	4 00			400
10	300 00		300 00							5 00	510					
6	312 00		312 00							5 00						50
7	390 00		390 00					25		4 00	223					75
4	198 00		198 00					25		2 00						
5	280 00		280 00					25		3 00						
9	396 00		396 00							3 00				9		
8	144 00		144 00							2 00				1		
15	780 00	96	876 00	675	8000			150						20		3800
10	520 00	198	715 00	550	2500	800		50				1	5 00	17		1950

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	36	Germany	Germany	m	3	3	1		4	48	4	no work
Boiler maker	32	"	"	m	4	4	1		5	44	8	not ans
"	28	"	"	m	3	3			3	52		
"	26	"	"	m	3	3			7	30	22	no work
Boiler maker	22	"	"	m	1	1			1	52		
"	29	Canada	Ireland	m	2	2		1	4	34	18	no work
"	34	U. S.	England	m	3	2	1		3	22	30	"
Laborer	49	Germany	Germany	m	1	1			2	52		
Boiler maker	28	U. S.	U. S.	m	1	1			1	45	4	no work
Laborer	30	"	Ireland	m	1	1			2	52		
Boiler maker	49	England	"	m	2	2			4	52		
Laborer	38	U. S.	"	m	2	2	1		3	50	2	no work
"	30	Germany	Germany	m	2	2		1	4	39	13	"
"	45	"	"	m	4	4	2		5	52		
Boiler maker	38	U. S.	U. S.	m	2	2	1		3	48	4	sickness
"	56	Ireland	Ireland	m	5	4	3		5	13	39	"
"	34	England	England	m	4	4	2		5	35	17	no work
Laborer	27	Poland	Poland	m	1	1			1	50	2	"
Boiler maker	33	Canada	Ireland	m	1	1			2	46	6	"
"	44	Ireland	"	m	5	5	3		6	52		
Laborer	40	Poland	Poland	m	5	5	2		6	48	4	no work
Boiler maker	29	U. S.	Ireland	m	1	1			2	46	6	"
Laborer	39	Poland	Poland	m	3	3	1		4	46	6	"
"	54	Germany	Germany	m	3	3	1		4	52		
"	47	"	"	m	7	7	1		8	52		
Iron worker	47	"	"	m	2	2	1		3	52		
Laborer	54	"	"	m	4	3	2		4	48	4	sickness
Helper	45	"	"	m	3	3	2		4	48	4	no work
Blacksmith	35	"	"	m	6	4	3		5	46	6	"
"	50	"	"	m	2	2	1		3	52		
Boiler maker	51	Ireland	Ireland	m	5	4	2	3	8	52		
Blacksmith	39	U. S.	"	m	4	4	2		5	26	26	accident
Laborer	29	"	U. S.	m	1	1	1		2	52		
"	35	"	"	m	2	2	1		3	50	2	no work
"	32	Germany	Germany	m	2	2	2		3	39	13	"
"	30	"	"	m	6	6	2		7	35	17	"
Foreman	27	"	"	m	2	2			3	52		
Engineer	32	Scotland	Scotland	m			1		2	51	1	not ans
Machine hand	33	U. S.	U. S.	wr	1	1	1		1	52		
Helper	29	Germany	Germany	s						49	3	no work
"	47	"	"	s						44	8	"
Laborer	25	"	"	s						52		
"	28	"	"	s						44	8	no work
Boiler maker	23	"	"	s						52		
"	24	"	"	s						39	13	no work
Laborer	29	Poland	Poland	s						52		
Boiler maker	19	Germany	Germany	s						48	4	no work
Laborer	25	"	"	s						39	13	"
Boiler maker	19	"	"	s						52		
Laborer	20	"	"	s						39	13	no work
"	22	Poland	Poland	s						39	13	"
Boiler maker	21	Germany	Germany	s			2	2	2	49	3	"
Laborer	14	"	"	s						26		first work
"	15	"	"	s						52		
"	14	Poland	Poland	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
88 10	\$388 80		\$388 80	\$388					\$7 00		\$500	1	\$4 00	8	\$50	\$500
10 00	440 00		440 00	440	\$1700	\$500	\$150				2000	1	5 00	10		1700
9 00	468 00		468 00	468	800		100							7		1200
6 25	247 50	\$150	397 50	397	1200	300					1100	2	9 00	6		2000
15 00	780 00		780 00	780				\$450	4 00					19		700
15 48	526 32		526 32	450				50	8 00		2000			25		350
15 48	340 56		340 56	340	2000	500						1	5 00			1800
8 00	416 00		416 00	416	1500	200						1	5 00	21		1800
12 00	576 00		576 00	576					5 00							200
7 50	890 00		890 00	890					8 00							300
11 25	585 00	300	785 00	785					10 00					32		200
8 25	412 50		412 50	412					6 00							150
8 25	321 75		321 75	321					5 00					6		600
9 00	668 00	300	768 00	625	700	800		100						7	100	700
15 48	443 04		743 04	393	1600	700	350					1	5 00			1350
13 50	175 50	75	250 50	800	1500	400								50		1300
15 48	541 80		541 80	541					9 00			1	5 00	12		100
8 25	412 50		412 50	412					6 00					6		350
15 48	712 08		712 08	600				100	not an					20		500
15 48	804 96		804 96	600				200	10 00					40		700
7 50	860 00	150	510 00	810	700			200						13	300	700
15 48	712 08		712 08	712					11 00							500
8 10	372 80		372 80	372					not an					10		350
8 25	429 00	300	729 00	475	1800		250							24		3000
8 00	416 00	150	566 00	566	1600							1	5 00	30		1850
12 00	624 00	330	954 00	550	4000	600	300				600	1	5 00	22		6000
7 50	860 00	150	510 00	450	1000	200	50					1	5 00	17		1200
8 00	384 00		384 00	384	1100	400					600	1	5 00	9	100	1200
10 50	488 00		488 00	483					6 00					17		200
9 70	504 40	100	604 40	470	1000	700	100							8		700
15 48	804 96		804 96	804					10 00		1000	1	5 00	29	750	150
8 25	214 50		214 50	800					7 00							300
7 50	390 00		390 00	390					4 00							150
10 50	525 00		525 00	525					15 00							450
9 75	380 25		380 25	300	1000	400	50							8		1000
7 50	262 50		262 50	262					5 00					9		200
21 00	1092 00		1092 00	575	2100			500						20		3000
10 10	515 10		515 10	515					7 00					7		40
8 25	429 00		429 00							\$4 00						300
7 50	367 50		367 50						3 50					4		50
8 10	356 40		356 40						3 50					43		25
7 50	390 00		390 00					*						13		50
8 25	393 00		393 00						3 50					22		100
12 00	624 00		624 00					*						17		100
15 00	585 00		585 00					200	3 50			1	5 00	20		500
7 50	390 00		390 00					50	3 50					6	10	150
8 25	396 00		396 00					*						3		50
7 50	292 50		292 50					*	3 50					1		50
9 50	494 00		494 00					*						9		50
7 50	292 50		292 50					*						8		100
8 25	321 75		321 75						3 25					3		100
12 00	588 00		588 00						4 50					8		200
3 00	78 00		78 00					*						3		
3 75	195 00		195 00					*						8		
3 75	195 00		195 00					*						10		

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Boiler maker	24	U. S.	Ireland	s				2	2	52		
"	24	"	U. S.	s						52		
Laborer	17	"	Ireland	s				1	1	52		
"	16	"	Germany	s						52		
Helper	36	Germany	"	s						52		
Laborer	35	Scotland	Scotland	s						52		
"	26	Germany	Germany	s						30	13	no work
Machine hand	29	"	"	s				2	2	26	26	sickness
C. R. & J. C. WILSON CARRIAGE CO.												
Wood worker	30	U. S.	U. S.	m	1	1			2	52		
"	32	Germany	Germany	m	1	1			2	52		
"	36	U. S.	U. S.	wr						52		
"	33	"	"	m	2	2	1		3	52		
"	26	Canada	"	m					1	52		
"	29	U. S.	Ireland	m	2	2			3	25	17	rheumatism
Laborer	45	Germany	Germany	m	4	4	2		5	52		
Wood worker	52	U. S.	U. S.	m					1	52		
Blacksmith	35	Canada	Ireland	m	2	2			2	52		
"	24	"	Canada	m					1	26		first work in U. S.
Foreman	25	U. S.	Germany	m					1	52		
Wood worker	45	Poland	Poland	m	5	5	2		6	52		
"	23	Canada	Canada	m	1	1		1	2	49	4	sick
"	30	Germany	Germany	m	1	1			2	52		
Carriage finisher	29	"	"	m	3	3	1		4	52		
Blacksmith	35	Canada	Ireland	m	2	2	2		3	50	2	no work
"	42	U. S.	U. S.	wr	5	5			5	22	30	sickness
Wood worker	39	Canada	Canada	m	1	1			2	52		
"	38	Germany	Germany	wr						52		
"	44	Canada	England	m	2	2	1		3	49	3	no work
"	60	Germany	Germany	m	6	2	1		3	52		
"	36	Canada	Scotland	m	4	4			5	50	2	no work
"	30	U. S.	Germany	m					1	52		
"	34	Canada	"	m	2	2			3	44	8	no work
"	55	U. S.	U. S.	m	2	1			2	45	7	sick and no work
Machine hand	31	"	"	m	1	1			2	52		
Wood worker	25	Germany	Germany	m					1	44	8	no work
Stock keeper	34	U. S.	U. S.	m	3	3	2		4	52		
Shipping clerk	45	Germany	Germany	m	7	7	2		8	39	13	sick
Laborer	27	"	"	m	3	3			4	52		
Wood worker	33	U. S.	"	m	3	3	1	1	5	49	3	no work
"	33	"	"	m	3	3			5	53		
"	35	Germany	"	m	2	2			3	49	3	sick
Foreman	31	"	"	m	1	1			2	52		
Wood worker	43	Canada	England	m	2	2	2		3	52		
"	31	Germany	Germany	m	3	3			4	52		
"	30	"	"	m	2	2			3	31	21	no work
Laborer	19	U. S.	"	s						52		
Wood worker	21	Scotland	Scotland	s						48	4	no work
"	23	Germany	Germany	s						52		
"	17	France	France	s						49	3	no work
Blacksmith	21	Ireland	Ireland	s				2	2	51	1	"
Laborer	15	U. S.	Germany	s						52		
"	16	"	"	s						52		
"	13	Poland	Poland	s						52		

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TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$390 00		\$390 00							\$4 00						\$25
12 75	668 00		668 00							10 00	\$1500	1	\$6 00			700
8 00	418 00		418 00							\$ 50						100
5 50	286 00		286 00													
8 25	429 00		429 00					\$100		\$ 50		1	5 00	9	\$50	1000
7 50	390 00		390 00							3 00	2000	1	5 00	10		100
7 50	292 50		292 50							\$ 50				25		100
7 50	195 00		195 00							\$ 50				10		50
15 00	780 00		780 00	\$480	\$4000	\$600	\$300									4000
10 00	520 00		520 00	370				150	\$8 00					5		500
12 00	624 00		624 00					200		4 00						400
10 00	520 00		520 00	520					12 00							500
12 00	624 00		624 00	385				285	18 00					9		1200
12 00	420 00		420 00	500					10 00							600
7 50	390 00		390 00	390					4 50			1	5 00	7	100	350
12 00	624 00		624 00	624					10 00		1000	1	5 00			600
9 00	468 00		468 00	460					5 00					6	500	200
10 00	278 00		278 00	223				50	8 00					7 mo	150	700
20 00	1040 00		1040 00	700				300	11 00					17	800	1000
7 50	390 00	\$375	765 00	530	2000	300	200							17	800	2000
12 00	576 00		576 00	576					8 50					13		400
15 00	780 00	50	830 00	800					10 00					9	100	2200
10 00	520 00		520 00	450	750			50						18		1000
12 00	600 00		600 00	600					10 50							600
12 00	264 00		264 00						4 00							
10 00	520 00		520 00	500					10 00		2000	1	10 00	16	10	500
12 00	624 00		624 00					150		4 00				29		800
11 00	559 00	90	629 00	320				300	12 00					22	50	2000
8 50	442 00		442 00	442	4000	400								39		4800
8 00	400 00		400 00	400					5 00					10	25	200
12 00	624 00		624 00	500				100	9 00							1000
10 00	440 00		440 00	400				40	5 50					3	50	400
13 50	607 50		607 50	600					10 50							400
12 00	624 00		624 00	624					10 00							600
13 50	594 00		594 00	575					5 00		500	1	9 00	8		500
10 50	546 00	100	646 00	540					9 00							500
10 00	390 00	150	540 00	375	1000	600	125				1000			15		300
8 00	416 00		416 00	360		300	50							8	100	1500
10 50	514 50		514 50	514	2200	700						1	5 00			2000
13 50	702 00		702 00	650	1800	1400		50								
9 00	441 00		441 00	440					5 00					23		800
15 00	780 00		780 00	680	2500	1800	100							9	15	1200
13 50	702 00	160	862 00	700	2900	800	180							3	2000	6000
10 50	546 00		546 00	446	1000	150	100							8		1000
10 50	325 50		325 50	250	900	150	50							7		900
4 50	234 00		234 00							3 00						25
7 50	380 00		380 00							\$ 50				5		100
10 00	520 00		520 00							\$ 75				21		45
4 00	196 00		196 00							*	200			13		
7 50	382 50		382 50	382						†				6		30
4 00	208 00		208 00					*		*						
3 50	182 00		182 00					*		*						
2 00	104 00		104 00					*		*						

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Blacksmith helper	20	Canada	Canada	s						48	4	laid off voluntarily
" finisher	22	England	England	s						52		
Carriage finisher	32	U. S.	Germany	s						47	5	no work
Teamster	36	Canada	Scotland	s				1	1	52		
Blacksmith finisher	18	U. S.	U. S.	s						46	6	no work
Wood worker	26	Canada	Canada	s						52		
"	33	"	Scotland	s						52		
"	22	"	Canada	s						52		
"	30	"	Ireland	s						52		
Blacksmith	27	"	Canada	s				1	1	52		
"	22	"	"	s						52		
Wood worker	22	"	"	s						52		
Blacksmith helper	21	"	"	s						34		first work in U. S.
Carriage finisher	21	U. S.	Germany	s						50	2	no work
MICHIGAN WIRE AND IRON WORKS.												
Iron worker	39	Germany	"	m	4	4	2		5	52		
Helper	24	"	"	m					1	52		
Wire weaver	34	"	"	m	1	1			2	52		
Packer	21	U. S.	Canada	m	5	5	4		6	52		
Wire weaver	39	Germany	Germany	m	4	4	2		5	48	4	no work
"	40	"	"	m	4	4	2		5	52		
"	44	"	"	m	1	1			2	49	8	no work
Wire worker	34	Austria	Austria	m	4	4	2		5	39	13	"
Wire weaver	35	Germany	Germany	m	4	4	1		5	52		
"	45	"	"	m	8	7	4		8	34	18	no work
"	53	"	"	m	6	3	3		4	44	8	"
Iron worker	35	U. S.	U. S.	m	3	3	3	1	5	52		
Machinist	33	"	Germany	m	1	1			2	52		
"	36	Canada	England	m	1	1	1		1	52		
"	43	"	Scotland	m	2	2	1		3	52		
Wire weaver	46	Germany	Germany	m	2	2	2		3	52		
Foreman	39	U. S.	U. S.	m	1	1	1		2	52		
Fireman	39	Poland	Poland	m	4	4	3		5	52		
Wire weaver	52	Germany	Germany	m	4	4	1		5	44	8	no work
"	45	England	England	m	5	5	3		6	52		
Iron worker	31	Germany	Germany	m	1	1			2	52		
"	27	U. S.	"	m					1	30	22	sickness
Wire weaver	43	Germany	"	m	2	2			3	26	26	no work
Machinist	52	Canada	Canada	wr	1	1	1		1	52		
Machine hand	18	U. S.	Bohemia	s				2	2	52		
Blacksmith	23	Germany	Germany	s						44	8	no work
Wire weaver	20	U. S.	"	s				1	1	50	2	sickness
"	28	Germany	"	s						52		
Blacksmith	30	"	"	s						52		
Wire worker	24	U. S.	Scotland	s				2	2	17	35	sickness
Wire weaver	20	"	U. S.	s						26	26	no work
Clerk	20	"	England	s						52		
Machinist	22	Sweden	Sweden	s						52		
Wire weaver	31	U. S.	France	s						52		
"	20	Germany	Germany	s						52		
Machinist	23	U. S.	"	s						52		
Wire weaver	29	"	U. S.	s				1	1	52		
Wire worker	31	Canada	Canada	s						26		first work in U. S.
Shipping clerk	18	"	"	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.	Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.		If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$360 00		\$360 00						\$3 00				2	\$15	\$75
7 50	360 00		360 00						3 00				2		50
9 00	423 00		423 00						3 00						25
9 00	468 00		468 00						3 00				9	\$50	700
9 00	414 00		414 00						3 25						
10 00	520 00		520 00						3 50				6		200
9 00	468 00		468 00						3 50	\$1000	3	\$40 00	9		500
9 00	468 00		468 00						3 55				3	25	35
13 50	676 00		676 00						4 00		3	22 50	10		500
13 50	702 00	\$450	1152 00	902	\$1800	\$1100	\$150	100		3000			3	700	1200
9 60	499 20		499 20						4 00				4		50
10 00	520 00		520 00						4 25				1	8	150
6 00	204 00		204 00						3 50				8 mo	5	25
9 00	450 00		450 00						3 50						25
9 00	468 00		468 00	468					8 00		1	5 00	11	400	400
8 00	416 00		416 00	416					7 00	2000			6	10	300
8 00	416 00		416 00	416					6 00	1000			9		200
13 50	702 00		702 00	475	2000	300	144	50		500	1	5 00			2400
9 00	432 00		432 00	432	1000	800					1	5 00	13		300
9 00	468 00	48	516 00	425	1200	600	25			2000	1	5 00	13		800
9 00	441 00		441 00	441					6 00				18		200
9 00	351 00		351 00	351	1000	400					1	4 00	17		1300
9 00	468 00	50	518 00	518					7 00	2000	1	5 00	18		400
9 00	306 00	200	506 00	326	800		130			575	1	5 00	20		1100
9 00	396 00	150	546 00	546					9 00				8		200
12 00	624 00	300	924 00	700					10 00	2000	1	5 00			3000
10 50	546 00		546 00	490					7 00				15		300
15 60	811 20		811 20	811	2500				10 00		2	8 00	15	560	1000
15 60	811 20		811 20	750						4500			9	800	4000
12 00	624 00		624 00	324	1500		200	100					18	200	2000
19 50	1014 00		1014 00	600	8000	1800	800			3000	1	15 00			2000
9 00	468 00		468 00	300	800	600	150			500	1	4 00	9		900
6 00	264 00	300	564 00	564					7 00	250	1	5 00	16		200
12 00	624 00		624 00	624					8 50	1250	1	5 00	36		500
20 00	1040 00	108	1148 00	900	1500			800		2150	2	10 00	21		2600
12 00	860 00		860 00	250				100	5 50	1000			19	200	600
9 00	224 00	50	274 00	234	1400	600				2000	1	5 00	19		1000
13 00	986 00		986 00										23		700
9 00	468 00		468 00	468					4 00		1	4 00			100
9 00	396 00		396 00					40					2	50	200
9 00	450 00		450 00						3 00						75
8 00	416 00		416 00						3 00				5		100
12 00	624 00		624 00					100	4 00	1000			9	25	600
7 50	127 50		127 50						4 00						100
9 00	234 00		234 00						3 50						30
10 00	520 00		520 00					100	5 00						200
10 50	546 00	84	630 00					150	3 00	2000	1	6 00	5		500
10 00	520 00		520 00						4 00	2000					500
9 00	468 00		468 00						3 50				3		150
15 00	780 00		780 00					150	4 00						1000
13 00	676 00		676 00						7 00						200
9 00	234 00		234 00						3 50				1	900	1000
7 50	390 00		390 00					50	†				1		100

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wire weaver	16	Germany	Germany	s						44	8	no work first work no work first work no work
Bobbin winder	14	U. S.	"	s						20		
"	16	"	U. S.	s						28	26	
"	13	"	Bohemia	s						13		
"	16	Germany	Germany	s						39	13	
Wire worker	16	"	"	s						52		no work
Bobbin winder	16	"	"	s						48	4	
Machine hand	17	U. S.	Bohemia	s						52		
Wire weaver	16	"	U. S.	s						52		
Machine hand	14	Germany	Germany	s						17		first work
"	15	U. S.	"	s						52		first work
"	16	"	"	s						52		
"	17	"	"	s						52		
"	15	"	"	s						39		
Bobbin winder	13	"	"	s						22		"
"	16	England	England	s						26	26	no work
"	14	Canada	"	s						50	2	
Machine hand	14	Germany	Germany	s						3		first work
"	13	Norway	Norway	s						4		
"	18	U. S.	Poland	s						3		"
ALLEN FOUNDRY CO.												
Core maker	42	Ireland	Ireland	m	6	5	2		6	48	4	no work
Molder	24	Germany	Germany	m	2	2			3	35	17	"
"	24	Poland	Poland	m					1	52		
"	26	"	"	m					1	52		
"	32	U. S.	France	m	6	6	2		7	52		
"	29	"	"	m					1	52		
"	25	"	Germany	m	2	2			3	52		
"	39	Canada	Scotland	m	4	4	2		5	52		
Laborer	36	Poland	Poland	m	5	5	3		6	48	4	no work
Molder	38	U. S.	U. S.	m	1	1	1		2	52		
"	57	"	"	m	1				1	39	13	no work
"	31	Canada	England	m	3	4	2		5	37	15	sick and no work
"	30	U. S.	Ireland	m	3	3	1	1	5	13	39	no work
"	23	Poland	Poland	m	1	1			2	52		
"	29	England	England	m					1	52		
"	34	Germany	Germany	m					1	52		
"	30	U. S.	U. S.	m	3	3			4	52		
Core maker	51	Germany	Germany	m	4	4	1		5	39	13	no work
Laborer	44	Ireland	Ireland	m	4	4	2		5	34	18	"
Molder	25	Germany	Germany	m					1	52		
Laborer	39	"	"	m	5	5	2		6	48	4	no work
"	51	Canada	Canada	m	5	4			5	48	4	"
"	30	U. S.	Germany	m	2	2		1	4	52		
Pattern maker	36	"	England	m					1	52		
Machine hand	22	Germany	Germany	m	2	2		2	5	44	8	sickness
Laborer	24	"	"	m	1	1			2	42	10	no work
Molder	32	Canada	"	m	2	2	1		3	52		
Carpenter	62	U. S.	U. S.	wt	2	2			2	26	26	vacation
Engineer	29	"	Ireland	s				2	2	52		
Molder	24	"	Germany	s				1	1	33	20	no work
Grinder	21	Germany	"	s				1	1	44	8	no work
Molder	18	U. S.	Ireland	s				2	2	52		
Laborer	20	"	U. S.	s						34	13	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Total annual income.	Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Weekly wages.	Annual earnings.	Other sources.			If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$5 00	\$220 00			\$220 00					\$40		+				2		
50 00	50 00			50 00					*		*						
50 00	65 00			65 00					*		*						
50 00	82 50			82 50					*		*						
50 00	97 50			97 50					*		*						
5 00	260 00			260 00					*		*				8		
5 00	144 00			144 00					*		*				5		
5 00	260 00			260 00					*		*				9		
5 00	260 00			260 00					*		*						
5 00	260 00			260 00					*		*						
2 00	42 50			42 50					*		*				10		
4 00	208 00			208 00					*		*						
5 00	156 00			156 00					*		*						
5 00	260 00			260 00					*		*						
1 95	195 00			195 00					*		*						
2 75	60 50			60 50					*		*						
2 50	65 00			65 00					*		*				8		
2 75	137 50			137 50					*		*						
2 00	9 00			9 00					*		*				6		
2 50	10 00			10 00					*		*				6		
2 00	9 00			9 00					*		*						
10 50	504 00			504 00	\$504					\$9 00					25		\$300
7 50	262 50			262 50	262					3 00					10		250
9 00	468 00			468 00	350	\$1200	\$700	\$50	15			\$500	1	\$3 00	12		700
9 00	468 00			468 00	468					3 50					9		400
12 00	624 00	\$75		699 55	699					10 00							300
12 00	624 00			624 00	624					9 00		75	1	5 00			400
12 00	624 00			624 00	624					10 00			1	5 00			150
20 00	1040 00			1040 00	500	3000	1000	500				3500	2	10 00	20		4000
7 50	360 00			360 00	310	800	900	50							15	\$10	700
18 00	986 00			986 00	700				200	8 00			1	5 00			500
12 00	468 00			468 00	468					10 00		2500	1	5 00			450
15 00	555 00			555 00	380	2000		100				2000	2	10 00	20		3000
17 00	221 00			221 00	300					free			1	5 00			700
10 00	520 00			520 00	450				50	3 00		350	1	8 00	7		500
13 50	702 00			702 00	500				200	8 00			1	5 00	8	200	850
12 00	624 00			624 00	550				30	10 00		2000	1	10 00	9	300	300
15 00	780 00			780 00	780					10 00			1	5 00			500
9 00	351 00	275		628 00	628	1800							1	5 00	37		2000
7 50	255 00			255 00	255					6 00		2000			28		100
10 00	520 00			520 00	520					4 00		300	1	5 00	6	250	300
10 00	480 00			480 00	480					6 00			1	5 00	9		100
7 50	360 00	150		510 00	510					9 00		2000			3	20	100
9 00	468 00			468 00	468					7 00		2100	2	10 00			800
15 00	780 00	780		1560 00	900				600	25 00							2000
7 50	330 00			330 00	330	700	450					2000	1	5 00	10		700
7 50	315 00			315 00	285				70	4 25					2	60	225
16 00	832 00			832 00					100		\$8 00		2	10 00	16		400
12 00	312 00			312 00							4 00						2000
10 00	520 00			520 00	520					12 00							200
9 00	288 00			288 00	288					+							100
7 50	330 00			330 00	330					+					7		200
10 00	520 00			520 00	520					+							
6 50	221 00			221 00							3 25						25

+ Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	25	Germany	Germany	s						52		
"	25	"	"	s	1			1	1	39	13	no work
"	31	U. S.	"	s						52		
Laborer	24	Germany	"	s						39	13	no work
"	26	U. S.	U. S.	s						28	26	"
Molder	19	"	England	s						52		
"	28	Germany	Germany	s						48	4	no work
Laborer	18	U. S.	"	s						52		
Molder	30	"	"	s						47	5	no work
"	21	"	Ireland	s				3	3	13	39	"
"	23	"	"	s						50	2	"
"	23	"	Switz.	s						22	30	"
"	16	"	Ireland	s						52		
Machine hand	17	Germany	Germany	s						52		
Laborer	16	"	"	s						50	2	no work
Machine hand	16	"	"	s						39	13	"
Core maker	15	England	England	s						52		
Laborer	15	Germany	Germany	s						26		first work
"	15	U. S.	Poland	s						30	22	no work
"	17	"	"	s						32	20	"
Molder	18	"	Germany	s						52		
"	17	"	U. S.	s						34	18	no work
Core maker	14	"	Germany	s						26		first work
BUHL STAMPING CO.												
Tinner	48	U. S.	France	m	4	1			2	44	8	no work
"	34	Canada	Scotland	m					1	52		
"	28	U. S.	Switz.	m					1	26	26	no work
"	29	"	Germany	m	2	2			3	52		
Machine hand	22	"	"	m	1	1			2	26	26	no work
Tinner	33	"	Ireland	m	1	1			2	52		
"	31	"	England	m	1	1			2	46	6	no work
Machine hand	26	England	"	m	5	5		1	7	52		
Engineer	42	Ireland	Ireland	m	5	5	2	1	7	52		
Tin plater	40	Canada	U. S.	m	8	8	1		4	52		
Tinner	27	U. S.	"	m	1	1			2	52		
"	23	"	Ireland	s				3	3	34	18	no work
Laborer	14	"	England	s						52		
Malper	16	Germany	Germany	s						50	2	no work
"	16	"	"	s						17	35	"
"	16	"	"	s						52		
Tinner	23	Canada	"	s				6	6	39	13	accident and no work
Laborer	15	Albania	Albania	s						44	8	no work
Tinner	19	Canada	Canada	s				1	1	26	26	sickness
Helper	18	U. S.	Ireland	s						39	13	no work
Tinner	26	Ireland	"	s				2	2	52		
Helper	15	Germany	Germany	s						48	4	no work
Tinner	20	Canada	England	s						39		first work in U. S.
Laborer	14	U. S.	Poland	s						52		
"	13	Poland	"	s						52		
Shipping clerk	29	Ireland	Ireland	s						52		
Machine hand	14	U. S.	Germany	s						49	3	no work
Helper	15	Canada	Scotland	s						52		
"	17	U. S.	Ireland	s						52		
Machine hand	20	"	U. S.	s						50	2	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
113 00	\$676 00	\$25	\$701 00							\$4 00				9		\$75
14 00	546 00		546 00							5 00				15		200
12 00	624 00		624 00					35		4 00						400
6 00	234 00		234 00					160		3 50				10		100
6 00	186 00		186 00							4 00						
9 50	442 00		442 00							3 50						60
15 00	720 00		720 00					200		4 00				21		600
6 00	812 00		812 00					25		3 50						
15 00	705 00		705 00							4 50		1	\$5 00			200
10 50	136 50		136 50							5 00						50
15 00	750 00		750 00							3 00		1	500			150
14 00	308 00		308 00							7 00						40
9 50	494 00		494 00					8		†				7		300
8 00	202 80		202 80					*		*				9		
8 00	196 00		196 00					*		*				13		
8 00	140 40		140 40					*		*				6		
2 40	124 80		124 80					*		*						
3 50	91 00		91 00					*		*				8		
8 00	104 00		108 00					*		*	\$300	1	3 00			
3 00	96 00		96 00					*		*	150	1	3 00			
9 00	468 00		468 00					*		*						
6 00	204 00		204 00					*		*						
1 00	78 00		78 00					*		*						
12 00	528 00	40	568 00	\$468				100	6 00					7		1000
12 00	624 00		624 00	424				200	15 00							1000
12 00	812 00		812 00	812					8 00			1	5 00			500
15 00	780 00		780 00	750				25	18 00							300
7 50	196 00	75	270 00	270					11 00							400
13 50	702 00		702 00	702					6 00							500
12 00	552 00		552 00	552					5 00							150
12 00	624 00	60	684 00	684					9 00			1	6 00	5	700	180
11 00	572 00		572 00	380	\$4500	\$80	\$165				2000	1	5 00	26		480
15 00	780 00		780 00	625				125	13 00		2000	2	7 50	1	300	700
12 00	624 00		624 00					50	7 00							125
8 00	272 00		272 00						4 00							40
3 00	156 00		156 00					*	*							
8 50	175 00		175 00					*	*					9		
8 00	51 00		51 00					*	*					8		
6 00	812 00		812 00					*						10		
10 50	409 50		409 50					*		4 00				5		150
2 75	121 00		121 00					*						15		
12 00	812 00		812 00							4 00				14		25
6 00	234 00		234 00					25	3 50							
13 00	676 00		676 00					100	4 00			1	4 00	3	60	500
4 00	192 00		192 00					*						9		
7 50	292 50		292 50					*	8 50					4	5	25
8 25	169 00		169 00					*	*							
3 00	156 00		156 00					*	*					12		
12 00	624 00		624 00					100	6 00					4	100	200
3 50	171 50		171 50					*			115					
4 50	234 00		234 00					*	*					3		
8 00	156 00		156 00					*	*							
3 50	175 00		175 00					*	*							25

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machine hand	19	Canada	Canada	s						52		
"	18	Germany	Germany	s						49	3	no work
"	18	U. S.	"	s						52		
Laborer	14	"	Poland	s						34		first work
"	15	"	"	s						44	8	not ana.
"	15	"	"	s						44	8	no work
"	16	"	Germany	s						39	13	"
"	15	"	Ireland	s						17		first work
Helper	16	"	U. S.	s						26	26	no work
"	14	"	"	s						26		first work
Tinner	28	Canada	England	s			1	1	1	52		
Packer	24	"	Canada	s						52		
Machine hand	17	Germany	Germany	s						30	22	no work
Foreman	35	England	England	s			2	2	2	52		
Shipping clerk	16	Canada	Canada	s						30	22	no work
Laborer	18	U. S.	Germany	s						48	4	"
Tin plater	20	"	U. S.	s						52		
Tinner	22	"	Germany	s			1	1	1	50	2	laid off
Japanner	14	"	U. S.	s						8		first work
Foreman	18	"	Germany	s						52		
Japanner	16	Canada	England	s						34		first work
Packer	20	U. S.	U. S.	s						48	4	no work
Helper	15	"	"	s						39	13	"
Laborer	16	"	Scotland	s						50	2	"
Helper	15	"	Ireland	s						39	13	"
"	14	"	Germany	s						42	10	"
EAGLE IRON WORKS.												
Machinist	48	Ireland	Ireland	m	4	3	2		4	52		
"	27	U. S.	Germany	m	1	1		2	4	48	4	no work
"	35	"	U. S.	m	4	4	2		5	52		
"	40	Scotland	Scotland	m	8	3			4	52		
Carpenter	55	England	England	m	4	2			3	52		
Machinist	38	Poland	Poland	m	4	4			5	52		
"	23	U. S.	Germany	m	1	1		1	3	52		
"	35	"	Scotland	m	1	1			2	52		
Carpenter	34	"	U. S.	m	3	3	2		4	44	8	sickness
Machinist	57	"	"	m	1				1	52		
"	37	"	Germany	m	2	2	2		3	52		
Laborer	27	"	"	m	1	1			2	49	3	foot hurt
Machinist	34	"	"	m				1	2	52		
Laborer	30	Ireland	Ireland	m	2	2			3	52		
"	39	Germany	Germany	m					1	39	18	no work
Machinist	47	Scotland	Scotland	m	4	4	2		5	52		
Laborer	39	Ireland	Ireland	m	6	6	3		7	44	8	no work
Boiler maker	35	"	"	m	6	6	4	1	8	52		
Laborer	29	U. S.	"	m	3	3			4	44	8	no work
"	49	Ireland	"	m	7	8			4	52		
Machinist	36	U. S.	Switz.	m	5	5	3		6	52		
Laborer	40	Germany	Germany	m	3	3	1		4	48	4	no work
"	40	Ireland	Ireland	m	1	1			2	52		
"	52	England	England	m	7	8	2		4	26	26	accident
"	40	Poland	Poland	m	7	7	2		8	52		
Boiler maker	32	England	England	m	1	1			2	52		
"	35	U. S.	Ireland	m	1	1			2	48	4	no work

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$390 00		\$390 00					\$50		\$3 00				2		\$150
6 00	294 00		294 00					45		2 00						100
7 50	390 00		390 00					40		2 50						100
2 75	98 50		98 50					*		*						
3 75	165 00		165 00					*		*						
4 00	176 00		176 00					*		*						
3 00	117 00		117 00					*		*						
3 00	51 00		51 00					*		*						
3 50	91 00		91 00					*		*						
3 00	78 00		78 00					*		*						
13 50	702 00		702 00							4 50				1 1/2	\$25	50
9 00	468 00		468 00					*		4 00				10		100
6 00	180 00		180 00							\$100				16		
12 00	624 00		624 00							3 50				2	30	100
6 00	180 00		180 00							3 00				10		
7 50	390 00		390 00					10		3 50						
15 00	780 00		780 00					90		4 50						175
13 00	650 00		650 00					250		4 00						800
3 00	24 00		24 00					*		*						
12 00	624 00		624 00					100		4 25						200
4 00	136 00		136 00					*		*				9		
3 00	144 00		144 00					*		*						85
2 50	97 50		97 50					*		*						
4 50	225 00		225 00					*		*						
3 25	126 75		126 75					*		*						
3 25	126 50		126 50					*		*						
13 50	702 00	\$400	1102 00	\$700	\$5000	\$2000		200			2000	1	\$5 00	30		\$500
15 00	780 00		780 00		1500	600		100			500	1	4 00			1200
18 00	986 00		986 00					200	\$14 00		2000					800
18 50	702 00		702 00					100	10 00		1000					1000
12 00	624 00	200	824 00						12 00			1	4 00	51		500
10 50	546 00		546 00		1400	1000	\$200							2 1/2		600
13 50	702 00	70	772 00					120	10 00		2000					2500
13 50	702 00		702 00					120	12 00							850
10 50	462 00	180	642 00		3000			300			2000					5000
13 50	702 00		702 00		1500			150			2000					2500
10 50	546 00		546 00		546				8 00		2000	1	5 00			300
9 00	441 00		441 00						7 00							300
20 00	1040 00		1040 00					150	10 00		2000	1	5 00			1000
9 00	468 00		468 00						9 00					8		200
7 50	292 50		292 50						5 00		2000	1	5 00	8		200
13 50	702 00	430	1132 00	850	1600	100		200						32		\$500
7 50	830 00	100	930 00	430					8 00					20	15	400
28 00	1456 00	72	1528 00	1,100				300	18 00		2000			20		800
9 90	435 80		435 80	435					3 00							200
9 00	468 00		468 00	468					10 00					24	50	200
13 50	702 00		702 00	702					9 00							500
8 40	403 20		403 20	403	1000	500						1	5 00	10	200	900
12 00	624 00		624 00	624					5 00					28		600
7 50	195 00	150	345 00	345					10 00					23		200
9 00	468 00	350	818 00	500	900	40	300				500	1	4 00	8		1100
15 48	804 98		804 98	575				200	16 00		3000	1	5 00	12		850
15 48	743 04		743 04	743					4 00							100

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist.....	31	U. S.	U. S.	m	2	2	1		3	52		
Boiler maker.....	42	Ireland	Ireland	HH	3	3		1	4	52		
Machinist.....	34	U. S.	"	HH	1	1			2	52		
Laborer.....	43	Germany	Germany	HH	2	2	1		3	23	16	no work
Machinist.....	39	U. S.	U. S.	H	3	3			4	52		
Blacksmith.....	37	"	England	s				2	2	52		
Machinist.....	23	Australia	U. S.	s						52		
"	16	U. S.	Ireland	s						52		
"	14	Canada	England	s						52		
"	23	U. S.	U. S.	s						52		
"	16	Germany	Germany	s						39	13	no work
Engineer.....	23	U. S.	France	s						34	18	sick and no work
Machinist.....	19	"	Canada	s						52		
Machine hand.....	17	"	Ireland	s						52		
Machinist.....	27	"	"	s						52		
"	17	"	Germany	s						52		
"	23	"	U. S.	s						32	20	no work
Boiler maker.....	33	"	Ireland	s						44	8	"
Laborer.....	17	"	England	s						50	2	"
Machinist.....	24	"	Germany	s				2	2	52		
"	32	"	"	s						50	2	sick
Machine hand.....	16	"	U. S.	s						52		
Machinist.....	29	"	"	s						52		
"	25	Ireland	Ireland	s						48	4	no work
Helper.....	24	U. S.	Scotland	s						30	22	"
"	43	Ireland	Ireland	s						31	18	"
Blacksmith.....	39	U. S.	Scotland	s						52		
"	29	Ireland	Ireland	wr	3	2	1		3	34	18	no work
Boiler maker.....	52	England	England	wr	2	1	1		1	32		
J. E. BOLLES & Co.												
Pattern maker.....	32	U. S.	U. S.	m				1	2	50	2	no work
Iron worker.....	29	"	"	m	1	1			2	49	4	"
Laborer.....	33	Poland	Poland	m	2	2			3	48	4	"
Iron worker.....	27	U. S.	Germany	m	2	2			3	44	8	"
"	31	"	Holland	m	4	4	2		5	44	8	"
"	25	England	England	m	4	4			1	48	4	not answered
Brass worker.....	30	U. S.	U. S.	m					1	52		
Iron worker.....	24	"	Germany	m	1	1		1	3	52		
Laborer.....	32	Germany	"	m	3	3			4	52		
Blacksmith.....	43	"	"	m	6	6	2		7	52		
Iron worker.....	28	"	"	m	1	1		2	4	52		
"	45	Canada	Canada	m					1	46	6	sick and no work
"	46	"	"	m	8	6	4		7	49	3	sickness
Machinist.....	78	Scotland	Scotland	m	1	1	1		2	52		
Laborer.....	42	Poland	Poland	m	3	3	1		4	46	6	no work
Machine hand.....	23	Canada	Canada	m	1	1			2	44	8	"
Laborer.....	43	Germany	Germany	m	4	4	1		5	32	20	"
Helper.....	35	"	"	m	2	2			3	50	2	"
Engineer.....	70	Scotland	Scotland	m	6				1	52		
Iron worker.....	32	U. S.	Germany	m	1				1	52		
Locksmith.....	36	Germany	"	m	1	1			2	39	13	no work
Machinist.....	47	"	"	m	4	4	1		5	46	6	"
Pattern maker.....	39	Canada	Scotland	m	1	1	1	2	4	52		
Stock keeper.....	25	U. S.	U. S.	m	1	1			2	39	13	no work

TABLE No. 1—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$702 00		\$702 00	\$702					\$10 00			1	\$5 00			\$900
15 48	804 98		804 98	804	\$1500						\$5000			35		2000
12 00	624 40		624 00	624					10 00		2000					300
7 50	270 00	\$100	\$370 00	\$370	1000	\$200					500	1	5 00	5	\$500	1000
15 00	780 00		780 00	780					8 00		2000					1500
13 50	702 00		702 00	702	1600	700	\$250				2000	1	5 00			1200
13 50	702 00		702 00	702						\$4 00				7		100
2 50	180 00		180 00	180				*								
7 50	360 00		360 00	360						4 00				11		150
13 50	702 00		702 00	702						4 00						100
2 40	98 80		98 80	98				*		*						
10 00	340 00		340 00	340						4 00						200
4 50	234 00		234 00	234						3 00						100
4 00	208 00		208 00	208				*								
15 00	780 00		780 00	780						5 00						200
6 00	312 00		312 00	312				\$100		*						
15 00	480 00	80	560 00	560				100		5 00	2000					2000
15 48	681 12		681 12	681						4 00	500					
5 10	255 00		255 00	255						12 00						
13 50	702 00		702 00	702						5 50		1	13 50			900
13 50	675 00		675 00	675						4 00						150
3 00	156 00		156 00	156				*		*						
13 50	702 00		702 00	702						4 00						40
13 50	648 00		648 00	648				100		3 75		1	5 00	6	100	300
9 00	270 00		270 00	270						4 00						40
9 00	306 00	86	402 00	402						3 50				26		80
18 00	986 00		986 00	986				300		5 00	2000	1	5 00			900
12 00	408 00		408 00	408						9 00						125
12 00	624 00		624 00	624						5 00		1	5 00	14		600
13 50	675 00		675 00	675					10 00							500
12 00	576 00		576 00	576					10 00							800
7 50	360 00		360 00	360					6 50					8	15	200
12 00	528 00		528 00	528					5 00		2000					400
12 00	528 00		528 00	528					8 00		2000					800
10 00	480 00		480 00	480					4 25					1	30	80
15 00	780 00	1300	1980 00	785				1200	10 00							2500
15 00	780 00		780 00	780					10 00			1	15 00			300
7 80	405 60		405 60	405					7 00		150			12		175
12 00	624 00	100	724 00	570	1500	600	100							9		900
12 00	624 00		624 00	624					7 00					4	40	50
12 00	552 00		552 00	552					11 00					4	125	250
12 00	588 00		588 00	588					12 00					11	1100	200
10 00	520 00	84	604 00	604	2000	700								22		1500
7 00	322 00	150	472 00	375	900	500	50		3 00					24		500
8 25	363 00		363 00	325				30	8 00					4	470	150
7 50	240 00	300	540 00	540					5 00					18		300
9 00	450 00		450 00	450	850	400						1	4 00	9	200	600
15 00	780 00	300	1080 00	885	7000		200							40		10000
10 00	520 00		520 00	520					5 00		2000	1	5 00			200
7 00	278 00		278 00	278					3 00					3	20	150
9 00	414 00	150	564 00	440	1400	300	75				2000	1	5 00	24		2000
13 00	676 00		676 00	500	900	500	100				2000			9	200	700
8 00	312 00		312 00	312					4 00							400

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Shipping clerk	26	U. S.	U. S.	m	2	2			3	52		
Foreman	34	"	"	m	4	4	1	2	7	52		
Blacksmith	42	Germany	Germany	m	3	3	1		3	39	13	accident
Laborer	47	"	"	m	4	4	4		5	52		
Helper	33	"	"	m					1	52		
Iron worker	36	U. S.	England	w'r						32		
Laborer	53	Germany	Germany	w'r	3	3			3	52		
Wire worker	24	Scotland	Scotland	s				1	1	46	6	no work
Machinist	28	Bohemia	Bohemia	s				1	1	26	26	
Wire worker	22	U. S.	Canada	s						52		
Painter	20	"	Germany	s						45	4	no work
Machine hand	18	"	Bohemia	s						39	13	"
Iron worker	23	"	Germany	s						52		
Wire worker	17	"	U. S.	s						26		first work
"	22	"	Germany	s				3	3	52		
Iron worker	21	Canada	Canada	s						52		
"	19	U. S.	Germany	s						52		
"	29	"	England	s						52		
Laborer	22	"	Canada	s						49	3	no work
Iron worker	15	"	Germany	s						39	13	"
"	22	Ireland	Ireland	s						52		
Blacksmith	36	Norway	Norway	s						49	3	no work
Helper	21	Canada	Canada	s						44	8	accident
Laborer	23	England	England	s						52		
Machinist	23	U. S.	U. S.	s						39	13	no work
Machine hand	17	"	Germany	s						46	6	"
Teamster	33	Denmark	Denmark	s						51	1	"
THE IRELAND & MATTHEWS M'r'g Co.												
Foreman	29	U. S.	U. S.	m	1	1			2	52		
Metal polisher	40	"	"	m					1	32	20	no work
Engineer	37	"	Ireland	m	5	5	4		6	52		
Metal polisher	25	"	U. S.	m	1	1			4	45	4	no work
Machinist	31	Sweden	Sweden	m	6	6	4		7	52		
Machine hand	23	U. S.	Germany	m	1	1			2	44	8	no work
Brass spinner	31	"	U. S.	m	1	1			2	39	13	"
Machine hand	27	"	Germany	m	5	5			6	39	13	
Machinist	37	Ireland	Ireland	m					1	52		
"	45	"	"	s	5	5			6	52		
Brass spinner	32	U. S.	"	m	2	2			3	52		
Carpenter	32	"	"	m	2	2	1		3	52		
Metal polisher	26	Canada	Canada	w'r	2	2		2	4	39	13	no work
"	25	U. S.	Ireland	w'r	2	2	2		2	52		
"	22	"	"	s						10	42	sickness
Machine hand	25	Canada	Scotland	s						44	8	no work
"	17	U. S.	U. S.	s						52		
"	18	"	England	s						30	22	not sma.
Plater	16	"	"	s						44	8	no work
Tool maker	17	"	Ireland	s						52		
Machine hand	19	"	U. S.	s						52		
Time keeper	22	"	Ireland	s						52		
Solderer	24	"	U. S.	s						39	13	no work
Finisher	18	Ireland	Ireland	s						52		
Laborer	17	U. S.	U. S.	s						39	13	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 50	\$546 00		\$546 00	\$488				\$50	\$8 00							\$400
38 46	2000 00		2000 00	1275				700	18 00		\$2000					2800
12 00	468 00		468 00	468					8 00							300
9 00	468 00		468 00	468	\$1800						2000	2	\$10 00	35		2000
9 00	468 00		468 00	418					3 00					18		200
13 50	702 00	\$84	786 00	786	1200							1	5 00			1200
10 50	546 00	330	876 00	876	2200						3000	1	5 00	37		3000
7 50	390 00		390 00					100	\$3 00			1	5 00	20		500
12 00	552 00		552 00	552					8 00					4		30
12 00	312 00		312 00	250				50	10 00		1000	1	5 00	3	200	600
9 00	468 00		468 00							3 00	500	1	3 00			200
7 50	390 00		390 00						3 50							35
4 50	175 50		175 50					*	*							
13 50	702 00		702 00					100	5 00		8000	2	30 00			300
4 50	117 00		117 00					*	*							100
9 00	468 00		468 00					25	5 00		400	1	10 00			125
9 00	468 00		468 00					*	3 50					8		75
7 00	354 00		354 00					*	*							40
13 00	676 00	10	686 00					400	4 00							800
12 00	568 00		568 00					*	4 50							200
3 00	117 00		117 00					*	*							
9 50	494 00		494 00					300	3 00					10		400
10 50	514 50		514 50						4 00					10		50
8 00	352 00		352 00					75	4 00					11		150
7 50	390 00		390 00						3 50					1	30	60
15 00	585 00		585 00					*	4 50		1	5 00				200
6 00	276 00		276 00					*	*							
9 00	459 00		459 00						4 00					6		350
18 00	936 00		936 00	525				350	13 00		4000	1	4 00			3000
10 00	320 00		320 00	320					6 00							50
15 00	780 00		780 00	780	3800						3000	1	5 00			4000
6 00	288 00		288 00	288					4 50		260					200
21 00	1092 00		1092 00	950				100	12 00		2000	1	5 00	10		800
7 50	330 00		330 00	330					7 00							300
18 00	702 00		702 00	702					16 00			1	4 00			500
18 00	702 00		702 00	702					12 00							5000
15 00	780 00		780 00	780					7 00					25		300
15 00	780 00		780 00	780	ref's'd									40		
18 00	936 00		936 00	850				75	10 50							800
12 00	624 00		624 00	624					10 00		5000	2	12 00			600
6 00	234 00		234 00	234					n't ans							100
21 00	1092 00	300	1392 00	870				500	10 00		1700	2	10 00	2		3000
15 00	150 00		150 00							5 00						50
12 00	528 00		528 00					150		4 00						500
5 00	280 00		280 00						3 00					4	100	
6 00	180 00		180 00						3 00							
6 00	264 00		264 00					30	4 00							100
9 00	468 00		468 00					25	4 00							
7 50	390 00		390 00					175		4 00						350
12 00	624 00		624 00						4 50		1000					200
15 00	585 00		585 00						4 00		75	1	5 00			800
4 50	234 00		234 00						3 50					7		
5 00	195 00		195 00						3 00							500

1. Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	• Nativity.		Married or single.	Families.				Total No. supported.	Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.		No. of weeks worked.	No of weeks lost.	
Metal polisher.	19	U. S.	Ireland	s						44	8	no work
"	27	"	"	s						34	18	"
"	23	"	"	s						34	18	"
Packer	25	Ireland	"	s						26	26	sickness
"	19	Denmark	Denmark	s						42	10	no work
Laborer	16	U. S.	Ireland	s						13	39	"
Plater	20	"	"	s				1	1	39	18	"
Laborer	20	Canada	"	s				1	1	38	39	"
Machine hand	15	"	Canada	s						39	13	"
Helper	17	U. S.	"	s						34	18	"
"	19	"	"	s						26	26	"
Lacquerer	17	"	Germany	s						17	35	"
Packer	20	"	U. S.	s						44	8	sickness
"	16	"	Ireland	s						39	18	no work
Laborer	16	"	Canada	s						26	26	"
"	17	"	U. S.	s						34	18	"
"	14	"	Ireland	s						13	13	first work
"	15	"	Germany	s						26	26	no work
"	15	Canada	Canada	s						39	13	"
"	17	U. S.	"	s						39	13	sickness
"	15	Ireland	Ireland	s						13	13	first work
"	14	U. S.	Canada	s						26	26	"
COPE BROS.												
Laborer	16	"	Scotland	s						44	8	no work
"	18	"	Germany	s						46	6	"
"	16	"	"	s						52		"
"	15	Germany	"	s						52		"
Wood worker.	17	U. S.	"	s						49	3	no work
Finisher	18	Germany	"	s						52		"
"	20	"	"	s						37	15	no work
"	17	U. S.	Ireland	s						52		"
"	18	"	U. S.	s						52		"
Laborer	16	England	England	s						39	13	no work
Cabinet maker.	24	U. S.	Germany	s						26	26	"
"	21	Germany	"	s				1	1	46	6	"
Laborer	26	Canada	Canada	s						52		"
Cabinet maker	28	Germany	Germany	s						26	26	no work
Finisher	19	"	"	s						52		"
"	18	U. S.	"	s						39	13	no work
"	26	England	England	s						26	26	sick and no work
"	19	Germany	Germany	s						52		"
"	25	U. S.	"	s						48	4	no work
Laborer	16	"	"	s						39	13	"
Pattern maker.	20	"	U. S.	s				1	1	52		"
"	22	Canada	Canada	s						44	8	no work
"	21	U. S.	Ireland	s				2	2	45	7	"
"	19	"	U. S.	s						52		"
Wood worker	27	"	Germany	s				1	1	39	13	no work
"	24	"	"	s						35	17	"
"	24	"	U. S.	s						39	13	"
Foreman	23	"	Germany	s						52		"
Turner	24	"	U. S.	s				1	1	35	17	sick and no work
Pattern fitter.	34	"	"	m				1	2	52		"
" maker	31	"	Germany	m	1	1	1		2	52		"

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
12 00	\$284 00		\$284 00							4 00						\$100
12 00	408 00		408 00							4 00						250
12 00	408 00		408 00							4 00						250
12 00	312 00		312 00							2500						1000
6 00	252 00		252 00													50
6 00	78 00		78 00							5 00						50
7 50	292 50		292 50							4 50						50
6 00	78 00		78 00							5 00						50
3 00	234 00		234 00					*		*						
3 00	102 00		102 00					*		*						
3 00	78 00		78 00					*		*						50
2 50	42 50		42 50					*		*						50
3 40	176 00		176 00					*		*	500					50
3 00	117 00		117 00					*		*						
3 00	93 60		93 60					*		*						
3 00	102 00		102 00					*		*						
2 50	82 50		82 50					*		*	150					
2 50	65 00		65 00					*		*						
3 00	117 00		117 00					*		*				9		
3 00	117 00		117 00					*		*						
2 00	39 00		39 00					*		*					5	
2 50	65 00		65 00					*		*	110					
3 50	154 00		154 00					*		*						
3 60	165 60		165 60					*		*						
2 60	135 20		135 20					*		*						
3 00	156 00		156 00					*		*					12	
3 00	294 00		294 00					*		*						
9 00	468 00		468 00					*		*					18	
6 50	240 50		240 50					*		*					17	25
5 00	260 00		260 00					*		*						
3 00	156 00		156 00					*		*						
3 48	135 72		135 72					*		*					3	
10 50	273 00		273 00					*		*						
10 50	468 00		468 00					\$50		8 50					5	200
7 83	407 16		407 16							8 50					6	250
10 50	273 00		273 00							8 50						150
10 00	520 00		520 00					75		4 00					5	100
10 00	520 00		520 00							3 00					17	200
8 50	381 50		381 50							3 00						
9 00	182 00		182 00							8 50					24	30
9 00	468 00		468 00							3 00					18	25
9 00	432 00		432 00					250		8 50						250
2 32	90 48		90 48							1 00						
9 00	468 00		468 00							3 75						100
18 00	792 00		792 00							5 00					12	600
10 50	472 50		472 50							5 00						150
5 00	280 00		280 00							4 00						75
9 00	351 00		351 00							4 00						40
10 50	367 50		367 50							4 00						25
9 00	351 00		351 00							3 00						300
15 00	780 00		780 00							4 00						350
10 00	350 00		350 00							4 00						30
25 00	1300 00		1300 00	\$800				500	\$5 00							1500
18 00	936 00		936 00	986	\$1200	\$200						1	5 00			1250

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Pattern maker	21	U. S.	Germany	m					1	52		
	22	"	"	m					1	52		
Finisher	25	"	U. S.	m					1	52		
Foreman	54	Germany	Germany	m	5	5	3		6	48	4	no work
Wood worker.	35	"	"	m	2	2			3	52		
Laborer	38	U. S.	"	m	3	3			4	52		
Engineer	52	U. S.	U. S.	m	4	2	2		3	39	13	no work
Wood worker	24	"	Germany	m	1	1		1	3	15	37	"
	29	"	U. S.	m	3	3	1		4	52		
Foreman	30	"	Germany	m	1	1			2	52		
MURPHY IRON WORKS.												
Molder	28	Germany	"	m	1	1			2	48	4	no work
	50	"	"	m	6	4	2		5	52		
Laborer	38	Ireland	Ireland	m	4	4	2		5	44	8	no work
Iron worker	61	Canada	Scotland	m	3	3	1		4	42	10	
Machinist.	57	Ireland	Ireland	m	5	5	1		6	46	6	"
"	37	Germany	Germany	m	3	3	2		4	52		
Laborer.	30	"	"	m	4	4			5	26	26	no work
	32	Canada	Canada	m	2	2		1	4	30	22	
Machinist	33	"	"	m	1				1	46	6	"
"	71	U. S.	U. S.	m	5				1	48	4	"
Blacksmith.	52	England.	England	m	2	2	1		3	30	22	"
Molder	49	"	"	m	3				1	30	13	sick and no work
	55	"	"	m	5	4	3	1	6	34	18	no work
Laborer	25	Germany	Germany	m	1				1	48	4	"
Molder	37	Scotland.	Scotland	m	4	4	1		5	44	8	" "
"	27	U. S.	Switz.	m	2	2			3	43	9	laid off
Cupola tender	49	Ireland	Ireland	m	4	3	1		4	52		
Laborer	44	Poland	Poland	m	7	7	1		8	50	2	no work
Core maker.	31	Germany	Germany	m	4	4	1		5	35	17	"
Molder	30	U. S.	U. S.	m	2	2	1		3	50	2	laid off
"	29	"	Germany	m	1	1			2	39	13	no work
"	35	"	Ireland	m	3	3			4	39	13	"
Laborer.	30	Ireland	"	m	3	3			4	48	4	"
Foreman	41	"	"	m	6	6	4	1	8	52		
Carpenter	55	Germany	Germany	m	1	1			2	48	4	no work
Pattern maker.	21	U. S.	U. S.	m					1	52		
	32	England	England	m	2	2			3	52		
Machinist	40	U. S.	"	m	6	6	4		7	48	4	no work
	25	Canada	Canada	m					1	50	2	"
Molder	35	U. S.	Germany	w'r					1	35	17	"
"	35	Ireland	Ireland	s				1	1	44	8	"
Machinist.	27	Switz.	Switz.	s						34	18	"
Molder	24	U. S.	Ireland	s				2	2	46	6	"
"	27	"	"	s						52		
"	21	Ireland	"	s					2	39	13	no work
Helper	22	U. S.	U. S.	s						52		
Molder	46	Ireland	Ireland	s						52		
Helper	34	U. S.	"	s						30	22	no work
Foreman	26	"	U. S.	s						52		
Machinist	23	Canada	Canada	s						52		
Machine hand	16	U. S.	England	s						32		first work
"	21	Germany	Germany	s						44	8	no work
"	18	U. S.	"	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$324 00		\$324 00	\$324					\$7 00							\$250
13 50	702 00		702 00	702					free							600
10 50	546 00	\$84	630 00	630	\$1000						\$2000					1200
9 00	438 00	450	888 00	888	2100											2300
11 60	608 20		608 20	490	1000	\$500	\$76				160			18	\$400	600
7 25	377 00		377 00	377					3 00							300
10 50	409 50		409 50	409					10 00		2000			6		500
7 80	117 00		117 00	117					free			1	\$5 00			200
15 00	780 00		780 00	680				100	10 00		2000					500
00	936 00		936 00	580	3000	1700	100				4000					2500
15 00	720 00		720 00	600				100	7 00		100	1	5 00	8		300
15 00	780 00	250	1030 00	800	1000			200			2000	2	9 00	42		1400
7 50	390 00		390 00	330					8 00					20		250
10 50	441 00		441 00	441	2500	400					2000			38	40	2100
12 00	552 00		552 00	552					10 00		250			37		300
13 50	702 00		602 00	550	1200		150							8	24	1600
9 50	195 00		195 00	250					4 00					10		300
9 00	270 00		270 00	270					9 00					25		200
12 00	552 00		552 00	350	1000		200							15	500	2000
12 00	576 00		576 00	576					18 00							1000
15 00	450 00		450 00	450					12 00		2000				3500	150
12 00	468 00		468 00	268	1000		200					1	4 00	40		1500
15 00	510 00		510 00	510	1800	500					1000	1	4 00	33		1450
10 00	480 00		480 00	480	1500	300					250	1	5 00	2	17	1700
15 00	660 00		660 00	660					10 00			1	5 00	36		500
15 00	645 00		645 00	645					10 00			1	5 00			700
12 00	624 00	150	774 00	774	2000							1	5 00	32		3000
7 50	375 00	150	525 00	480	800	150						1	4 00	9	12	900
12 00	420 00		420 00	250	1800	400	150				2000	1	5 00	17		1800
15 00	750 00		750 00	750					10 00		100	1	4 00			400
15 00	585 00		585 00	450				25	7 00		100	1	5 00			600
15 00	585 00		585 00	585					11 00		100	1	4 00			400
9 00	492 00		492 00	325	1250	900	50									600
19 00	968 00		968 00	770	2500			200			2000			10	25	6500
10 50	504 00		504 00	450	2000			50				1	4 00	36		2200
9 00	468 00		468 00	468					6 00		3000					700
15 00	780 00		780 00	520	1600	600	180							10		1600
15 00	720 00	300	1020 00	830	1500	100	200									2500
12 00	600 00		600 00	600					11 00			2	10 00	28		500
15 00	525 00		525 00							\$3 50	7000	2	8 00			260
16 00	704 00		704 00	500				150	10 00			1	5 00	20		600
10 50	357 00		357 00							8 50				3		50
15 00	690 00		690 00							5 00		1	5 00			800
15 00	780 00	80	860 00					300		5 00	100	1	4 00			2000
9 00	351 00		351 00						4 00			1		9		80
6 00	312 00		312 00							8 50						180
15 00	780 00		780 00					150		4 00		1	5 00	44		1500
9 00	270 00		270 00						4 00							150
16 50	858 00	100	958 00					500		5 00						3500
10 50	546 00		546 00							3 50				3	40	500
3 80	96 00		96 00							*						
9 00	396 00		396 00							4 00						
6 00	312 00		312 00							*				18		200

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time..		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machinist.....	21	U. S.	U. S.	s						52		
Laborer.....	27	Ireland	Ireland	s						35	17	no work
Molder.....	25	U. S.	"	s						42	10	"
J. B. WILSON & Co.												
Molder.....	58	Ireland	"	m	6	2	2	1	4	52		
Laborer.....	35	"	"	m	1	1	1		2	39	13	no work
Cupola tender.....	35	"	"	m	2	2			3	46	6	"
Molder.....	32	"	"	m	3	3			4	42	10	"
Machinist.....	42	U. S.	Germany	m	3	3	2		4	48	4	"
".....	42	Scotland	Scotland	m	4	4	1		5	52		
Pattern maker.....	41	Canada	"	m	2	2			3	52		
Foreman.....	51	Scotland.	"	m	6	4	3		5	52		
Machinist.....	50	"	"	m					1	52		
".....	68	U. S.	France	m	6	2			3	17	35	sick and no work
".....	51	Scotland.	Scotland.	m	1				1	52		
Laborer.....	45	Ireland.	Ireland.	m	4	4	1		5	39	13	no work
".....	47	Poland.	Poland.	m	4	4	3		5	52		
".....	30	U. S.	Ireland.	m	3	3			4	44	8	no work
".....	39	"	"	m	5	5	2		6	26	26	"
Blacksmith.....	37	Canada.	Scotland	m	1	1	1		2	46	6	sickness
Helper.....	52	England.	England.	m	1	1			2	50	2	no work
Molder.....	45	U. S.	Germany	m	1	1	1		2	52		
Core maker.....	26	Ireland.	Ireland.	wr				1	1	44	8	no work
Molder.....	60	England.	England.	wr	4					15	37	not ans.
Machine hand.....	20	Canada.	Canada.	s						52		
Machinist.....	18	"	"	s						48	4	no work
Laborer.....	36	Ireland.	Ireland.	s						26	26	"
".....	29	"	"	s						39	13	"
Molder.....	17	England.	England.	s						52		
".....	24	U. S.	Ireland.	s						44	8	no work
Machinist.....	22	"	Switz.	s						52		
".....	24	"	U. S.	s						50	2	no work
Engineer.....	45	Scotland	Scotland	s				1	1	35	17	"
ROX STEVENS MFG. Co.												
Machinist.....	38	U. S.	Ireland	m	4	4	1		5	52		
".....	29	Canada	Scotland	m	2	2	1		3	52		
Foreman.....	45	Ireland	Ireland	m	4	4	2		5	52		
Brass finisher.....	34	"	"	m	4	4	2		5	44	8	no work
Pattern maker.....	59	Scotland	Scotland	m	2				1	52		
".....	27	U. S.	Germany	m	1	1			2	52		
".....	39	France.	France.	m				5	6	50	2	no work
Brass molder.....	40	England.	England.	m	6	6	3		7	52		
Laborer.....	27	Germany.	Germany.	m	1	1			2	52		
Brass finisher.....	22	Canada.	Ireland.	m					1	52		
Machinist.....	23	U. S.	Germany	s				5	5	52		
Brass molder.....	23	"	Ireland	s				1	1	34	18	no work
".....	27	"	U. S.	s				1	1	52		
Metal polisher.....	20	Canada	Canada	s				1	1	52		
Machinist.....	19	U. S.	Ireland	s						52		
Vise hand.....	16	"	Germany	s						39	13	no work
Laborer.....	20	Germany	"	s						52		
Vise hand.....	25	U. S.	U. S.	s				1	1	52		
Brass finisher.....	16	Germany	Germany	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$702 00		\$702 00					\$200		\$5 00						\$500
9 00	315 00		315 00					175		4 00				10		250
12 00	504 00		504 00							4 50						100
10 00	750 00	\$450	1200 00	\$950	\$4500		\$250				\$2000	1	\$4 00	44		10000
7 50	292 50		292 50	292					\$7 00					16		100
12 00	552 00	120	672 00	672	1300									19		2000
15 00	630 00		630 00	630					not an			1	4 00	20		400
13 50	648 00		648 00	525	1600	\$30 00	100				500	1	4 00			1600
16 50	858 00	986	1794 00	1000	10000		100	500			3000			21		15000
16 50	858 00	624	1452 00	700	3000	2500	150	300						41		11500
24 00	1248 00	144	1392 00	868	5000			500			2000	1	5 00	31		7000
16 50	858 00	600	1458 00	800	3000			500						31		12000
15 00	255 00	312	567 00	567	6000											12000
13 00	676 00		676 00	676					15 00		2000			22	\$250	400
7 50	292 50	400	692 50	692	1800	200					95			24		1300
8 40	436 80		436 80	436	1000	200								17	25	1200
9 00	396 00		396 00	396					7 00							100
7 50	195 00	250	445 00	445					8 00							300
16 50	759 00		759 00	500	1700	550	180				2000	1	5 00	7	200	1750
9 00	450 00	264	714 00	280	1800	400	400							12	73	4000
15 00	780 00		780 00	470	2500			300						25		3000
7 50	330 00		330 00	330					not an					25		75
18 00	270 00		270 00							4 00		1	4 00	20	500	1000
4 20	218 40		218 40							8 00				4		50
7 50	360 00		360 00					117		4 00				10		300
7 50	195 00		195 00							4 00				17		10
7 50	292 50		292 50							8 50				6	10	100
3 00	156 00		156 00					*		*				16		
15 00	660 00		660 00							4 00						100
13 50	702 00		702 00							5 00	1000					100
15 00	750 00		750 00					400		4 00						750
10 00	350 00		350 00							5 00		1	5 00	8	20	200
18 00	986 00		986 00	786				150	11 00							900
13 50	702 00		702 00	702					10 00			1	5 00	27		900
29 00	1508 00	750	2258 00	800	3500			1400						27		18000
15 00	660 00		660 00	660				50	7 00					1	100	100
15 00	780 00	60	840 00	700				100	9 00		1000			42		2000
15 00	780 00		780 00	580				200	6 00							1000
13 50	675 00		675 00	675					6 00					18	450	150
13 50	702 00	150	852 00	852					10 50			1	5 00	35		200
8 25	429 00		429 00	300	700	380	100							4	2	400
18 50	702 00		702 00						7 00					5	60	100
13 50	702 00		702 00	475	1000	500	200									700
13 50	459 00		459 00	459					7 00							100
18 00	986 00		986 00	500				200	11 00							1200
10 50	546 00	500	1046 00	1046	3500									2		4000
10 50	546 00		546 00							6 00						75
3 50	136 50		136 50					*		*						
6 00	312 00		312 00							*						
12 00	624 00		624 00							4 00	1000	1	\$25 00	3		35
3 00	156 00		156 00					*		*				8		150

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Brass finisher	18	U. S.	Ireland	s						52		
"	20	"	"	s						39	13	no work
"	20	Canada	U. S.	s						52		
"	20	"	England	s						26	26	no work
"	18	U. S.	Bohemia	s						39	13	
Laborer	16	"	U. S.	s						8		first work
Brass finisher	26	Canada	Ireland	s						48	4	no work
"	17	U. S.	U. S.	s						52		
"	18	"	Germany	s						52		
"	22	Germany	"	s						52		
Core maker	24	U. S.	Ireland	s				2	2	50	2	no work
"	17	Germany	Germany	s						52		
"	16	"	"	s						13	39	no work
Brass molder	23	U. S.	Ireland	s						26	26	
"	18	"	Germany	s						52		
"	17	Canada	England	s						52		
Book-keeper	20	U. S.	U. S.	s						52		
Shipping clerk	19	"	England	s						52		
Machine hand	18	Germany	Germany	s						44	8	no work
"	18	U. S.	U. S.	s						52		
Machinist	20	Canada	Germany	s						52		
Machine hand	18	U. S.	Canada	s						52		
DETROIT HEATING AND LIGHTING CO.												
Steam fitter	40	U. S.	France	m	1			1	2	30	22	no work and sick
Pipe fitter	28	"	Germany	m	1	1	1		2	47	5	sick and no work
Machine hand	27	England	England	m	2	2			3	52		
Steam fitter	56	U. S.	Scotland	m	2	1	1		2	50	2	no work
Blacksmith	62	England	England	m	3	1			2	52		
Machinist	28	U. S.	U. S.	m					1	52		
"	35	"	"	m	2	2	2	1	4	52		
Carpenter	87	Canada	Canada	m	5	5	2		6	52		
Shipping clerk	41	U. S.	Germany	m	4	4	4		5	13	39	no work
"	39	Canada	England	m	6	6	3		7	52		
Pattern maker	38	England	"	m	5	5	4		6	52		
Foreman	29	Canada	"	m	2	2			3	52		
Steam fitter	41	"	Canada	m	4	4	2		5	52		
"	26	U. S.	U. S.	m					1	52		
"	28	Canada	"	m	3	3			4	39	13	no work
Iron worker	40	France	France	s			2		2	52		
Steam fitter	23	Canada	Canada	s			1		1	39	13	no work
Pipe fitter	21	U. S.	U. S.	s			2		2	52		
Machine hand	18	Canada	Ireland	s						52		
Pipe fitter	24	Scotland	Scotland	s			1		1	34	18	no work
Iron worker	30	"	"	s						52		
Tinsmith	33	U. S.	Germany	s						52		
Machine hand	18	"	Canada	s						39	13	no work
Machinist	23	England	England	s						52		
Tinsmith	28	France	France	s			1		1	44	8	no work
"	21	Belgium	Belgium	s				1	1	30	22	
"	30	U. S.	Canada	s						49	3	
"	17	"	U. S.	s						47	5	
"	18	"	Ireland	s						26	26	
"	18	"	Germany	s						36	16	
Steam fitter	20	"	U. S.	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning a home, its value.	If in debt on home, amt 't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$780 00		\$780 00					\$300		\$5 00						\$50
7 00	273 00		273 00							3 50						50
7 00	364 00		364 00							*						20
10 50	273 00		273 00					*		*				19		75
6 00	234 00		234 00					*		*				17		
8 00	24 00		24 00					*		*						
12 50	648 00		648 00					50		4 00				9		100
8 50	182 00		182 00					*		*						
6 00	312 00		312 00					*		*						
15 00	780 00		780 00					250		4 00				4		450
9 00	450 00		450 00							5 00						125
4 50	234 00		234 00					*		*				6		
4 00	52 00		52 00					*		*				9		150
13 50	851 00		851 00					*		5 00						
5 00	280 00		280 00					*		*				15		
3 50	182 00		182 00					*		*						
7 50	890 00		890 00							4 00						500
6 00	812 00	\$10	822 00					75		*				7		300
8 50	154 00		154 00					*		*						
5 00	280 00		280 00					*		*						
7 50	890 00		890 00					*		3 50				3		60
4 50	234 00		234 00					*		*						
9 00	270 00		270 00	\$270					\$8 00							500
12 00	564 00		564 00	564					8 00		\$2000	1	\$10 00			200
9 63	501 80		501 80	501					6 50		188			6	\$36	100
13 50	675 00		675 00	675	\$600											900
14 00	728 00		728 00	728					7 00		600			36		300
13 80	702 00		702 00	500					7 50							400
15 00	780 00		780 00	780					10 00		\$250	2	14 00			1500
12 50	702 00		702 00	525	1600	\$700	\$84				2000	1	5 00	23		1200
12 00	156 00	10	166 00	166	875	2000					5000	2	10 00			3000
7 31	380 12		380 12	380					10 00					8		300
15 00	780 00		780 00	780	2000	1300					3000			15	50	1100
15 00	780 00		780 00	650				100	10 00		2500	1	4 00	27		600
15 00	780 00		780 00	780					10 00					35		800
12 00	624 00		624 00	624					9 00			1	9 00			850
9 00	351 00		351 00	310				40	3 00					24		100
15 00	780 00		780 00	780	2000						2000	1	5 00	38		2500
9 00	351 00		351 00					50		3 50				13		100
9 00	468 00		468 00					*		4 00				10		250
6 00	312 00		312 00					*		*				8		100
12 00	408 00		408 00							4 00						
15 00	780 00		780 00					300		4 50				2	250	800
10 50	546 00		546 00					300		3 50	2000	1	5 00			1500
4 00	156 00		156 00					*		*						
12 00	624 00		624 00					100		*				5		200
10 50	462 00		462 00							3 50				7 1/4	60	175
9 00	270 00		270 00							5 00				21		75
8 78	429 24		429 24					35		4 50	75	1	5 00			100
4 50	211 50		211 50					*		*						
8 50	143 00		143 00					*		*						100
5 50	198 00		198 00					*		*						
7 50	890 00		890 00							2 50						50

* Lives at home and gives wages to parents. + Lives at home pays no stated amount.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Pipe fitter.....	30	U. S.	Ireland.	s	—	—	—	—	—	46	6	no work
Foreman.....	25	Canada.	Canada.	s	—	—	—	—	—	52	—	—
FULTON IRON AND ENGINE WORKS.												
Laborer.....	37	Canada.	"	m	3	3	2	—	4	50	2	no work
".....	57	Ireland.	Ireland.	m	10	7	3	—	8	48	4	sickness
".....	27	England.	England.	m	2	2	1	—	3	52	—	—
Machinist.....	55	Scotland.	Scotland.	m	4	2	2	—	3	48	4	no work
Helper.....	51	England.	England.	m	1	1	1	—	2	52	—	—
Laborer.....	36	Germany.	Germany.	m	1	1	—	—	1	52	—	—
Machinist.....	30	"	"	m	2	2	—	—	3	52	—	—
".....	39	U. S.	"	m	2	2	—	—	3	52	—	—
Helper.....	28	Germany.	"	m	—	—	—	—	1	52	—	—
Brass molder.....	60	Switz.	Switz.	w'r	3	—	—	—	—	49	3	sickness
Laborer.....	19	Scotland.	Scotland.	s	—	—	—	—	—	47	5	no work
".....	14	"	"	s	—	—	—	—	—	35	—	first work
Grinder.....	22	Belgium.	Belgium.	s	—	—	—	—	—	35	17	no work
Laborer.....	18	U. S.	U. S.	s	—	—	—	—	—	52	—	—
Blacksmith.....	22	Germany.	Germany.	s	—	—	—	—	—	52	—	—
Machinist.....	20	U. S.	"	s	—	—	—	—	—	52	—	—
".....	22	"	Canada.	s	—	—	—	—	—	52	—	—
Machine hand.....	18	"	U. S.	s	—	—	—	—	—	52	—	—
".....	18	"	"	s	—	—	—	—	—	52	—	—
Pattern maker.....	19	Scotland.	Scotland.	s	—	—	—	—	—	52	—	—
".....	17	U. S.	Canada.	s	—	—	—	—	—	34	18	no work
Machine hand.....	17	"	Germany.	s	—	—	—	—	—	52	—	—
Machinist.....	26	"	Scotland.	s	—	—	—	—	—	52	—	—
Helper.....	18	"	Germany.	s	—	—	—	—	—	44	8	not ans
DETROIT EDGE TOOL WORKS.												
Knife maker.....	32	U. S.	U. S.	m	3	3	—	—	4	44	8	no work
Blacksmith.....	38	Germany.	Germany.	m	4	4	2	—	5	52	—	—
Engineer.....	24	Canada.	Canada.	m	1	1	—	—	2	52	—	—
Helper.....	25	Germany.	Germany.	m	4	4	1	—	5	39	13	no work
Blacksmith.....	30	"	"	m	1	1	—	—	2	52	—	—
Grinder.....	30	U. S.	"	m	1	1	—	—	2	52	—	—
Laborer.....	24	England.	England.	m	1	1	—	—	1	46	6	sick and no work
Watchman.....	36	Germany.	Germany.	m	1	1	1	—	2	52	—	—
Laborer.....	38	"	"	m	3	3	—	—	4	52	—	—
Machinist.....	35	"	"	m	3	3	—	—	4	52	—	—
Grinder.....	19	U. S.	Ireland.	s	—	—	—	—	—	44	8	no work
".....	25	Germany.	Germany.	s	—	—	—	—	—	52	—	—
Machine hand.....	19	U. S.	U. S.	s	—	—	—	—	—	39	13	no work
Helper.....	18	"	Germany.	s	—	—	—	—	—	52	—	—
AMERICAN BRASS AND METAL WORKS.												
Engineer.....	33	Germany.	"	m	5	5	3	—	6	52	—	—
Vice hand.....	40	"	"	m	2	2	1	—	3	46	6	sickness
Locksmith.....	31	"	"	m	3	3	—	—	4	52	—	—
Brass finisher.....	40	"	"	m	2	2	—	—	3	52	—	—
".....	27	"	"	m	1	1	—	—	2	52	—	—
Machinist.....	60	Canada.	U. S.	m	2	2	—	—	3	46	6	no work
".....	34	Bohemia.	Bohemia.	m	2	2	—	1	4	52	—	—
Tinner.....	40	Germany.	Germany.	m	5	5	1	—	6	22	30	sickness
Brass finisher.....	26	"	"	m	1	1	—	—	2	46	6	no work

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$414 00		\$414 00							\$4 50						\$100
15 00	780 00		780 00					\$300		4 50		1	\$3 00	2	\$300	1000
7 50	375 00		375 00	\$375					\$6 50					5	1000	500
7 50	380 00	\$100	480 00	480					free					37	800	800
9 00	468 00	92	560 00	560					6 00		\$460	1	5 00	100	250	
15 00	720 00		720 00	720	\$1000				8 00			1	5 00	20	1500	400
9 00	468 00		468 00	468										1550	400	
9 00	468 00		468 00	468	1400	\$200								230	1500	
13 50	702 00		702 00	702					7 00					180	800	
12 00	624 00		624 00	624					7 00			2	5 00	3	850	
9 60	499 20		499 20	399				100	4 00					2	400	
9 00	441 00		441 00							4 00				30	50	
6 00	282 00		282 00							3 00				15	50	
3 00	105 00		105 00					*		*				6 1/2		
4 50	157 50		157 50							3 00	125			3	25	
6 00	312 00		312 00					150		4 00						
10 50	546 00		546 00							3 00		1	5 00	8	300	
5 00	260 00		260 00							*					100	
12 00	624 00		624 00					*	free	*					200	
2 05	106 60		106 60					*		*						
3 60	187 20		187 20					*		*						
4 50	224 00	300	524 00					200		4 00				2	300	400
2 40	81 60		81 60					*		*						
3 50	182 00		182 00					*		*						
8 00	416 00		416 00							4 00					100	
6 00	264 00		264 00							3 00						
15 00	660 00		660 00	660					8 00						200	
18 00	996 00		996 00	525	1800	300	\$150	200				1	5 00	22	2500	
12 00	624 00		624 00	570				50	8 00			1	5 00	4 1/2	40	500
6 60	257 40		257 40	257					2 50			1	5 00	22	100	
11 00	572 00		572 00	572	1200	700	50							9	800	
9 00	468 00		468 00	468					6 00		500	1	6 00		1500	
7 50	345 00		345 00	285				100	4 00					5	25	750
10 50	546 00		546 00	1200	400									25	1200	
10 00	520 00		520 00	390	1200	600	90							10	250	800
12 00	624 00		624 00	524	1000	500	100				2000	1	5 00	9	800	
9 00	396 00		396 00					*		*					100	
10 50	546 00		546 00					100		3 50				4	20	400
6 00	284 00		284 00							3 50					35	
6 00	312 00		312 00					20		†	200				100	
12 00	624 00	96	720 00	720	3000	200			6 00		2000	1	10 00	22	3000	
9 00	414 00		414 00	414										7	300	
10 00	520 00		520 00	400	850	400	100							9	750	
15 00	780 00	150	930 00	700				200	6 00		1000	1	5 00	21	1500	
9 00	468 00		468 00	468					6 00			1	5 00	8	200	
12 00	552 00		552 00	552					18 00					39	600	
12 00	624 00	100	724 00	575				100	15 00		1600	1	15 00	6	500	
12 00	264 00	200	464 00	600					8 00		2000	1	5 00	10	350	
10 50	468 00	100	568 00	568					8 00			1	5 00	3 1/2	550	

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wire worker	27	Germany	Germany	m	2	2			3	52		
Metal polisher	21	U. S.	Canada	m	1	1			1	13	39	sick and no work
Plater	34	"	U. S.	m	1	1			2	52		
Blacksmith	57	"	"	w'r	4	2	2		3	52		
Laborer	28	"	Germany	s						46	6	no work
Core maker	17	"	"	s						48	4	no work
Brass finisher	16	"	U. S.	s						52		
Laborer	22	Germany	Germany	s						26		first work in U. S.
"	14	U. S.	U. S.	s						26		first work
Metal polisher	21	Germany	Germany	s						52		
Core maker	17	U. S.	U. S.	s						52		
Brass molder	19	Germany	Germany	s						13	39	no work
Melter	20	U. S.	U. S.	s						44	8	"
Laborer	18	"	Germany	s						48	4	"
Metal polisher	19	Germany	"	s						52		
Laborer	16	"	"	s						17		first work in U. S.
W. H. ANDERSON & SON.												
Machinist	32	U. S.	Switz.	m	4	4	1	1	6	52		
Helper	40	Germany	Germany	m	5	5	2		6	52		
Tool maker	23	Canada	Ireland	m					1	52		
Engineer	26	U. S.	U. S.	m	3	3			4	52		
Blacksmith	32	Scotland	Scotland	m	1	1			2	52		
"	29	U. S.	Germany	m	1	1			2	39	13	no work
"	26	"	"	m					1	52		
Laborer	55	England	England	w'r						52		
"	18	U. S.	U. S.	e						39	13	no work
SIEVERS & ERDMAN.												
Blacksmith	18	"	Germany	s						44	8	"
Painter	17	"	"	s						35	17	"
"	14	"	"	s						52		
"	19	"	"	s						52		
Wood worker	21	"	"	s						50	2	no work
"	21	"	"	s						52		
Blacksmith	20	"	Austria	s						52		
Laborer	22	"	Germany	s						52		
Blacksmith helper	18	"	"	s						52		
Blacksmith finisher	22	"	"	s						49	3	laid off
Blacksmith	18	"	"	s						42	10	no work
Wood worker	20	"	"	s						52		
"	23	"	"	s						50	2	no work
Trimmer	17	Germany	"	s						50	2	sick
Carriage trimmer	22	U. S.	France	s						52		
Trimmer	27	"	Germany	s				2	2	41	11	no work
Painter	26	Germany	"	s				2	2	52		
"	24	U. S.	"	s						44	8	no work
Blacksmith	26	Germany	"	m	3	3			4	44	8	sickness
"	30	Canada	Ireland	m	4	4	1		5	50	2	no work
Engineer	33	U. S.	England	m				1	2	26	26	laid off
Blacksmith	29	"	U. S.	m	1	1	1		2	52		
"	35	"	"	m	1	1	1		2	51	1	no work
Wood worker	50	Canada	England	m	3	3	1		4	53		
"	31	U. S.	Germany	m					1	48	4	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$702 00		\$702 00	\$702					\$5 00			1	\$5 00	18		\$400
8 40	109 20		109 20	109					6 00							150
11 20	582 40		582 40	482					8 00							700
15 00	780 00		780 00	550	\$2000	\$400	\$200	\$150				1	4 00			1900
15 00	780 00		780 00													100
7 50	345 00		345 00							\$4 00						75
										4 00						
5 00	240 00		240 00					*		*						
6 90	358 80		358 80					*		*						
8 00	208 00		208 00					*		4 50				½		50
3 00	78 00		78 00					*		*						
8 00	24 00		24 00					*		*						
10 50	546 00		546 00					*		3 50				11		175
								*		*						
6 08	312 00		312 00					*		*						
7 00	91 00		91 00					*		*						
6 00	254 00		254 00					*		3 00				12		50
7 50	360 00		360 00					*		3 50						50
9 00	468 00		468 00					*		*	\$50			2		200
8 50	59 50		59 50					*		*				½		
16 00	832 00		832 00	832	1500	500						1	15 00			3000
7 50	390 00		390 00	390	2400	500										2200
12 00	624 00	\$14	638 00	548				80	6 00					18		900
10 50	546 00		546 00	498				50	5 00					10		900
15 00	780 00		780 00	780					7 00		100	1	5 00	10	\$10	200
9 00	351 00		351 00	351					6 00							200
12 00	624 00	120	744 00	744					15 00							400
12 00	624 00		624 00							8 50				36		50
6 00	234 00		234 00					*		*	200					
4 00	176 00		176 00					*		*						
2 00	70 00		70 00					*		*						
2 00	104 00		104 00					*		*						
6 00	312 00		312 00					*		*						
5 00	250 00		250 00					*		*	2000	1	5 00			100
5 00	290 00		290 00					*		*						150
6 00	312 00		312 00						3 50	300		1	4 00			80
7 50	390 00		390 00						3 00							50
5 00	290 00		290 00					10	4 00							
8 00	392 00		392 00						4 00							150
4 00	168 00		168 00						3 00							100
5 00	290 00		290 00						3 00							50
12 00	600 00		600 00						3 00							200
4 00	200 00		200 00						1 50							
10 00	520 00		520 00					75	3 75					8		150
9 00	369 00		369 00					60		3 50						100
11 00	572 00		572 00							3 50				9	100	120
10 00	440 00		440 00						5 00							25
16 50	728 00		728 00	620				100	8 00			1	5 00	24		600
18 50	675 00		675 00	570				100	8 50			1	4 00	2	75	600
15 00	390 00	300	690 00	450	5200			240								5500
14 00	728 00		728 00						10 00		3000					2000
11 00	561 00		561 00						7 00		2000	2	18 00			800
11 00	572 00	250	822 00						16 00							800
12 00	576 00		576 00	576					9 00					27		200

* Lives at home and gives wages to parents.

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker	30	U. S.	U. S.	m	3	3			4	35	17	no work
"	43	Germany	Germany	m	3	3	2		4	52		
"	35	Canada	England	m	7	7	2		8	52		
Trimmer	54	Germany	Germany	m	5	2	1		3	52		
"	24	U. S.	"	m					1	35	17	no work
Foreman	33	"	"	m	4	4	1	1	6	52		
Painter	31	Canada	"	m	1	1			2	52		
"	32	Germany	"	m	2	2			3	44	8	no work
"	36	Canada	Canada	m	4	4	3		5	51	1	"
GALVIN VALVE & HYDRANT CO.												
Molder	33	U. S.	Ireland	m	3	3	1		4	49	3	"
"	45	Ireland	"	m	4	4	2		5	47	5	"
Machinist	23	U. S.	Germany	m					1	52		
"	46	England	England	m	3	3	2		4	52		
Blacksmith	42	Ireland	Ireland	m	6	6	2		7	52		
Book keeper	31	U. S.	"	m	1	1			2	52		
Machinist	25	Canada	England	m	1	1			2	39	13	no work
Engineer	49	U. S.	Ireland	m	4	4	1		5	52		
Machinist	30	Canada	U. S.	m					1	52		
Machine hand	30	Germany	Germany	m	3	3	1		4	52		
Melter	45	Ireland	Ireland	m	5	4			5	52		
Laborer	35	Germany	Germany	m	5	5	2		6	39	13	no work
Molder	36	U. S.	Ireland	m	2	2			3	39	13	"
"	34	England	England	m	2	2		1	4	52		
Melter	49	Ireland	Ireland	m	5	5	2		6	52		
Pattern maker	40	Scotland	Scotland	m	4	4	2		5	52		
Brass finisher	30	U. S.	Ireland	s				3	3	52		
Pattern maker	36	Germany	Germany	s				1	1	52		
Machinist	38	U. S.	Ireland	s						39	13	no work
Molder	30	"	"	s						39	13	"
"	22	"	Canada	s						49	3	"
Blacksmith	30	Ireland	Ireland	s						30	22	"
Brass finisher	18	Canada	Canada	s						50	2	"
Foremaker	23	U. S.	Ireland	s						26	26	"
Brass molder	20	"	Germany	s						45	7	"
"	17	Canada	Canada	s						52		
Brass finisher	18	U. S.	Ireland	s						48	4	no work
Laborer	37	"	"	s						48	4	"
"	25	"	Germany	s						46	6	sick and no work
Core maker	16	"	Canada	s						44	8	no work
"	19	"	"	s						46	6	"
Laborer	21	Scotland	Scotland	s						10		first work in U. S.
Molder	30	U. S.	Ireland	s						52		
Laborer	23	Germany	Germany	s						52		
ANDREW HARVEY & SON.												
Foreman	42	"	"	m	4	4	2		5	52		
"	32	Canada	Scotland	m	1	1		1	3	52		
Brass finisher	37	France	France	m					1	32	20	no work
Foreman	40	Scotland	Scotland	m	1	1	1		2	52		
Machinist	31	Canada	England	m					1	52		
Laborer	31	Russia	Russia	m	3	3			4	52		
Melter	34	Canada	Ireland	m	3	3			4	52		
Molder	30	U. S.	Germany	m	1	1			2	48	4	no work

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt. t.	Amount paid on home during the year.	Amount saved aside * on payment on home	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$420 00		\$420 00	\$310	\$800	\$350	\$50	\$40				1	\$4 00			\$500
12 00	624 00		624 00	624	1000									20		1200
10 50	546 00		546 00	546					\$9 00			1	8 00	16		350
18 00	986 00		986 00	780	2000			200			\$2000	1	14 00	38		4000
15 00	525 00	\$80	525 00	425				100	6 50							300
16 00	882 00		882 00	870	1000	300	175									1100
13 50	702 00		702 00	702					9 50		2000	1	6 00			300
9 00	396 00		396 00	396	1200	600								12		800
9 00	459 00		459 00	459					8 00					12	\$200	250
13 50	661 50		661 50	661					8 00		1000					350
15 00	705 00		705 00	705					10 00			1	5 00	30		500
13 50	702 00		702 00	702					10 00							100
15 00	780 00		780 00	675				75	10 00			2	10 00	28		700
12 00	624 00	300	924 00	750	900	800	100				1000			27		400
15 00	780 00	72	852 00	852					11 00							3000
13 50	526 50		526 50	526					4 00		1000			15		450
12 57	653 64	450	1103 64	900				100	9 50							500
13 50	702 00		702 00	500				150	8 00					14		400
12 00	624 00		624 00	546	1200	350								7		1050
10 50	546 00		546 00	546					7 00					15		500
7 50	292 50		292 50	292					5 00					10		300
12 00	468 00		468 00	468	1800	800								6		750
15 00	780 00		780 00	780					14 00			2	10 00	23	200	800
15 00	780 00	150	930 00	700	1600	450	150		10 00		2000			10		1400
16 50	858 00		858 00	858							200			10		150
14 00	936 00		936 00	936					†			1	5 00	24		100
13 50	702 00		702 00	702					†							
12 00	468 00		468 00						†							
15 00	585 00		585 00						\$4 50							100
12 00	588 00		588 00						5 00							75
									4 00							100
12 00	360 00		360 00													
3 00	150 00		150 00					*	3 50	1000	1	5 00	15			100
9 00	234 00		234 00					*	*					7		
7 50	337 50		337 50					*	3 00		1	4 00				200
4 50	234 00		234 00					*						10		80
10 50	504 00		504 00						5 00							
7 50	380 00		380 00						3 50							15
7 50	345 00		345 00						3 50							25
5 00	220 00		220 00					*	*							
9 00	414 00		414 00					*	*							50
7 50	75 00		75 00						2 50							
15 00	780 00		780 00						4 00					4	250	100
7 50	380 00		380 00						3 50					30		300
																10
18 00	986 00		986 00	986	1200	300					3000	1	5 00	40		1200
18 00	936 00		936 00	400	1700	500	300	200			1000	2	10 00	3	800	1700
13 50	432 00		432 00	350				75	6 00							250
18 00	986 00	96	1082 00	400	3000	900	400	100			3000	3	14 00	38		3000
10 00	520 00		520 00	450				50	10 00		1000			3		500
8 00	416 00		416 00	350	685	585	50					1	5 00	7		350
10 50	546 00	25	571 00	571					5 00			1	5 00	13	50	800
10 00	480 00		480 00	480					7 00							150

* Lives at home and gives wages to parents. † Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Laborer	38	Germany	Germany	m	4	4	3		5	23	30	no work
Molder	45	England	England	m	1	1			1	52		
Shipping clerk	35	Scotland	Scotland	m	1	1	1		2	52		
Pattern maker	45	U. S.	England	m	4	4			5	52		
Steam fitter	44	Scotland	Scotland	m	3	3	1		4	50	2	sickness
"	32	"	"	m				1	2	52		
"	21	U. S.	U. S.	s						44	8	no work
Machine hand	18	Ireland	Ireland	s						34		first work in U. S.
Helper	15	U. S.	Germany	s						52		
Steam fitter	18	"	England	s						48		accident
Machine hand	15	Canada	Germany	s						34	18	no work
"	17	U. S.	"	s						49	8	
Helper	16	Canada	Canada	s						26		first work
Brass finisher	17	"	"	s						52		
Machine hand	17	U. S.	Germany	s						48	4	no work
Brass molder	20	Canada	Canada	s						52		
Helper	20	Scotland	Scotland	s						52		
Machinist	28	"	"	s						50	2	accident
Helper	17	U. S.	U. S.	s						34	18	no work
Brass finisher	18	Canada	England	s						52		
WM. LINDEMANN.												
Blacksmith	31	U. S.	France	m	1	1			2	52		
"	30	Germany	Germany	m	1	1			2	34	18	no work
"	39	"	"	m	4	4	2		5	52		
Painter	29	Scotland	Scotland	m				2	3	52		
"	30	U. S.	Germany	m	1	1			2	52		
Wood worker	40	Germany	"	m	4	4	2		5	52		
"	30	U. S.	Switz.	m	1	1			2	39	13	no work
Painter	36	"	Bohemia	wr				1	1	26	26	"
Blacksmith	23	"	Germany	s				2	2	52		
Painter	19	Germany	"	s				1	1	39	13	no work
Blacksmith	27	"	"	s						52		
HUGH JOHNSON.												
Blacksmith	55	"	"	m	2	1			2	52		
"	45	"	"	m	4	3	2		4	52		
"	47	"	"	m	2	2	1		3	52		
Trimmer	28	U. S.	"	m	1	1			2	46	6	no work
"	31	"	U. S.	m				1	2	52		
Wood worker	45	Germany	Germany	m	6	6	4		7	52		
Painter	38	Canada	Canada	m	2	2			3	52		
"	31	U. S.	Germany	m	4	4			5	52		
Wood worker	47	Germany	"	m	1	1			2	34	18	no work
"	32	U. S.	England	m	1	1		1	3	50	2	sickness
Painter	31	Germany	Germany	m	1	1			2	34	18	no work
"	33	Canada	"	m	4	4	2		5	37	15	"
"	30	"	"	m	1	1		2	4	39	13	"
Blacksmith	16	U. S.	"	s						52		
"	24	Germany	"	s				2	2	52		
Laborer	16	U. S.	Canada	s						48	4	no work
Wood worker	15	"	Germany	s						52		
Painter	25	"	"	s						39	13	no work
Laborer	17	"	Ireland	s						26	26	"
Painter	17	"	Germany	s						50	2	"

TABLE No. 1.— CONTINUED.—*Showing Individual Reports.*

Income.				Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, am t.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness.		
\$7 50	\$185 00		\$185 00	\$185	\$900			\$250	\$10 00		\$800	2	\$15 00	9	\$1000
15 00	780 00		780 00	450							3000	2	13 00	8	1000
13 50	702 00		702 00	425	1800	\$800	\$200	125				4	17 00		1800
12 00	624 00		624 00	400	1000	1250	1000	250			2200	4	18 00	18	650
18 50	675 00		675 00	400	2100	600									2000
10 00	520 00		520 00	375	1000	300	100					2	10 00	9	1000
6 00	264 00		264 00					*		*					200
3 00	102 00		102 00					*		*		1	2 50	3	
2 80	130 00		130 00					*		*					
10 50	504 00		504 00					260		\$4 00					300
2 50	85 00		85 00					*		*				3	
4 00	198 00		198 00					*		*		1	2 50		
3 00	78 00		78 00					*		*		1	2 50	7	
4 00	208 00		208 00					*		2 50		1	2 50	8	
8 50	168 00		168 00					*		*					
6 00	812 00		812 00					*		*		1	5 00	8	50
6 00	312 00		312 00					*		*				19	75
10 50	525 00		525 00					* 30		4 00		1	5 00	3	80
3 00	102 00		102 00					*		*					100
5 00	260 00		260 00							2 00		1	2 50	8	
15 00	780 00		780 00	650				85	6 00						350
9 00	306 00		306 00	808					4 00					2	800
13 50	702 00		702 00	702	2000	900						1	5 00		1800
8 00	416 00		416 00	376				40	8 00					4	200
12 00	624 00		624 00	624					6 50		600	1	5 00		450
11 00	572 00		572 00	572	1500	700								10	400
8 00	312 00		312 00	312					8 00			1	5 00		1000
9 00	234 00		234 00	234					+						850
6 75	351 00		351 00	351					+						25
8 00	312 00		312 00	312					+						100
7 00	364 00		364 00					25		3 50				9	25
														1	40
14 50	754 00		754 00	650	4500			100			800	2	10 00	38	6000
9 00	468 00	\$200	668 00	575	1000	300	50				800	1	5 00	22	1000
15 00	780 00	300	1080 00	525	3000		25	500			800	2	10 00	25	4000
12 00	552 00		552 00	552					4 50						150
65 00	780 00		780 00	400	1500	1200	300								300
13 50	702 00		777 00	777	1500	500					2000	2	10 00	23	1000
10 00	520 00	75	520 00	520					7 00					1	200
15 00	780 00		780 00	650				100	8 00		150	1	5 00		1200
11 00	374 00		374 00	374					6 00		2000	1	5 00	22	550
13 50	675 00		675 00	675					9 00						250
10 50	357 00		357 00	357					5 50					16	800
12 00	444 00		444 00	444	1300	550					557	1	5 00	32	1050
10 50	409 50	150	559 50	559	2500	1000								23	1900
6 00	312 00		312 00					*							
8 00	416 00		416 00							8 00	100	1	5 00	15	300
2 00	96 00		96 00					*		*					
3 00	156 00		156 00					*		*					
12 00	468 00		468 00					*		4 00					200
3 00	78 00		78 00					*		*					300
4 50	225 00		225 00					*		*					

* Gives wages to parents and lives at home.

† Lives at home and supports family.

§ Lives in Canada.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Painter.	21	Canada.	Canada.	s						44	8	no work
"	20	U. S.	Germany.	s						39	13	"
"	22	Canada.	Canada.	s						30	22	"
RUMSEY MFG. CO.												
Wood worker.	16	"	"	s						48	4	"
Blacksmith.	19	U. S.	England.	s				1	1	52		"
Carriage trimmer.	19	"	U. S.	s						44	8	no work
Wood worker.	18	"	Germany.	s						40	12	"
Laborer.	28	"	"	s						52		"
Wood worker.	18	"	U. S.	s						52		"
Carriage trimmer.	21	"	Germany.	s						14	35	no work
Painter.	21	Germany.	U. S.	s						48	4	"
Wood worker.	28	Canada.	England.	s						52		"
"	25	U. S.	"	s				2	2	48	4	"
Carriage painter.	19	"	Germany.	s						50	2	no work
Carriage trimmer.	44	"	U. S.	m	1	1	1		2	52		"
Foreman.	29	Canada.	Scotland.	m	1	1		2	4	52		"
Blacksmith helper.	25	"	England.	m		1			2	52		"
Carriage finisher.	24	U. S.	Germany.	m	2	2			8	44	8	no work
Foreman.	35	"	U. S.	m			2		3	52		"
Painter.	24	"	"	m	2	2			3	48	4	no work
ART STOVE CO.												
Molder.	19	"	"	s						51	1	"
Laborer.	15	Poland.	Poland.	s						52		"
Molder.	19	Germany.	Germany.	s				2	2	39	13	no work
"	23	Russia.	Russia.	s						46	6	"
Laborer.	26	Ireland.	Ireland.	s				1	1	39		first work in U. S.
Tinner.	25	Canada.	"	s						50	2	no work
Laborer.	23	Germany.	Germany.	s				1	1	39	13	"
Molder helper.	19	Italy.	Italy.	s				1	1	51	1	"
Molder.	22	Canada.	Canada.	s						52		"
"	39	Ireland.	Ireland.	m	3	3	1		4	50	2	no work
"	37	Germany.	Germany.	m	2	2	1	1	4	51	1	"
Foreman.	37	Ireland.	Ireland.	m	5	5	4		6	52		"
Carpenter.	50	U. S.	U. S.	m	2	1			2	44	8	no work
Metal polisher.	32	Germany.	Germany.	m	2	2		2	6	26	26	"
Engineer.	35	Switz.	Switz.	m					1	52		"
Stove moulder.	33	Germany.	Germany.	m	3	3	2		4	52		"
"	21	U. S.	U. S.	m					1	49	3	no work
Laborer.	31	Germany.	Germany.	m	2	2			5	52		"
Molder.	25	"	"	m	2	2			1	48	4	no work
"	33	"	"	m					3	48	4	"
"	29	"	"	m	3	3			4	40	12	sick and no work
"	21	Russia.	Russia.	m					1	49	3	no work
JAMES FLOWER & BROTHER.												
Pattern maker.	51	Ireland.	Ireland.	m	6	2			8	46	6	"
Engineer.	39	Switz.	Switz.	m	1	1			2	52		"
Laborer.	35	Germany.	Germany.	m	2	2			3	52		"
"	35	"	"	m	3	3			4	52		"
"	45	"	"	m	1	1	1		2	52		"
Machinist.	46	France.	France.	m	2	2			3	52		"
"	48	England.	England.	m					1	52		"

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TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 50	\$462 00		\$462 00							\$3 50				1	\$20	\$100
10 50	409 50		409 50					*		3 50				3		50
9 00	270 00		270 00													
5 00	240 00		240 00					*		*				2		50
7 50	890 00		890 00	\$390					+							100
9 00	396 00		396 00							4 00	\$1000	1	\$2 50			100
7 50	300 00		300 00							3 50	2000	1	5 00			100
7 50	390 00		390 00					\$50								
6 00	312 00		312 00							5 50						40
9 00	126 00		126 00							3 00						40
7 50	360 00		360 00							2 50						100
9 00	468 00		468 00							3 50				3	75	200
10 00	480 00		480 00	850				100	+							75
7 50	375 00		375 00							4 00						
13 00	702 00		702 00	700					\$12 00		2000					800
15 00	780 00	\$80	860 00	875				150	10 00			2	7 00		75	600
10 50	546 00		546 00	546					10 00							250
9 00	396 00		396 00	396					3 50		170					400
13 50	702 00		702 00	500	\$1200	\$1100	\$120									600
12 00	576 00		576 00	570					8 00							850
12 00	612 00		612 00					*		*				5		35
3 00	156 00		156 00					*		+				10		25
12 00	468 00		468 00	468						8 00				2	150	75
6 00	276 00		276 00							3 50				3	30	40
7 50	292 50		292 50					20								
9 00	450 00		450 00							4 00	1000	1	5 00	4	100	75
9 00	351 00		351 00							3 50				9		100
7 50	382 50		382 50							3 00				14	25	200
4 00	208 00		208 00							free	1000	1	5 00	17		200
18 00	900 00		900 00	900					12 00					22		600
12 00	612 00		612 00	521	800	100	100				600	1	4 00	18		1000
18 00	936 00		936 00	936					12 00		2000			22		6000
10 50	462 00		462 00	462					13 00							500
7 50	195 00		195 00	240					5 00			1	4 00	8	100	200
15 00	780 00		780 00	650				100	10 50		3000	1	5 00	18		400
7 50	390 00		390 00	390	1000	500								21		1000
7 50	367 50		367 50	367					3 00							50
10 50	546 00		546 00	546					3 50			1	4 00	64	250	650
13 00	624 00		624 00	424				100	5 00					18		1000
12 00	576 00		576 00	576					6 00			1	4 00	11		800
12 00	480 00		480 00	480					4 50					9	50	300
10 00	490 00		490 00	490					3 00			1	4 00	4		300
18 00	828 00	50	878 00	878	3000						2000			31		4000
10 00	520 00		520 00	520	1000						2000	1	5 00	39		1350
7 50	390 00		390 00	395				25	6 00		199			7	300	400
10 50	546 00		546 00	546					free			1	4 00	17		180
7 50	390 00		390 00	390					5 00		2000	1	5 00	28	250	250
13 50	702 00		702 00	702					8 00		2000	1	5 00	32		400
12 00	624 00		624 00	624	1800						2000	2	9 00	27		3000

* Lives at home and gives wages to parents.

‡ Lives at home and supports family.

TABLE No. 1.- CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	45	England	England	m	2	2	2	1	4	52		
"	50	"	"	m	3	3	3		4	52		
Brass finisher	38	Germany	Germany	m	4	4	1		5	52		
Helper	32	Ireland	Ireland	m	1	1			1	35	17	no work
Machinist	45	England	England	m	1	1	1		2	52		
Blacksmith	32	Canada	Ireland	m	1	1			2	52		
Teamster	44	U. S.	U. S.	m	5	5	1		6	52		
Machinist	40	England	England	m	2	2	1		3	52		
Laborer	28	Germany	Germany	s				2	2	52		
Brass finisher	20	U. S.	Scotland	s						52		
Brass molder	22	"	Germany	s						52		
Core maker	15	"	U. S.	s						26	26	no work
Laborer	21	Switz.	Switz.	s						26	26	"
Brass finisher	32	U. S.	England	s				2	2	52		
Machine hand	16	"	U. S.	s						52		
"	16	"	"	s						52		
Brass finisher	21	Canada	Canada	s						52		
Machinist	19	U. S.	U. S.	s						52		
"	23	England	England	s						52		
"	45	"	"	s						52		
"	18	U. S.	"	s						52		
"	25	Canada	Canada	s						52		
THE EASY WAGON GEAR CO.												
Wood worker	56	U. S.	U. S.	m					4	52		
Finisher	36	"	"	m	2	2			3	50	2	vacation
Trimmer	36	"	"	m	1	1			1	34	18	no work
Painter	43	"	"	m	3	3	3		4	13	39	"
"	24	"	"	m					1	52		
Laborer	16	"	"	s						52		
Blacksmith	30	Canada	Canada	s				1	1	52		
Finisher	23	Germany	Germany	s						39	13	no work
"	19	Canada	Ireland	s						50	2	"
THOMAS MCGREGOR.												
Laborer	32	Poland	Poland	m	4	4	1		5	44	8	no work
Helper	33	"	"	m	5	5	1		6	44	8	"
"	59	"	"	m	8	8	1		9	52		
Blacksmith	39	Germany	Germany	m	6	6	1		7	47	5	no work
Laborer	50	Poland	Poland	m	3	3	2		4	48	4	"
Boiler maker	30	U. S.	Scotland	m					1	52		
"	33	"	England	m	3	3			4	26	26	no work
"	26	Poland	Poland	m	2	2		3	6	52		
"	37	Germany	Germany	m	7	7	4		8	31	18	not ans.
"	37	Scotland	Scotland	m	7	7	4		8	48	4	no work
Laborer	40	Poland	Poland	m	3	3	1		4	44	8	sick and no work
Boiler maker	42	Ireland	Ireland	m	6	6	2		7	49	3	not ans.
"	23	U. S.	Scotland	m	1	1			1	46	6	no work
"	35	"	U. S.	m	6	5			6	52		
Laborer	45	France	France	m					1	52		
Boiler maker	54	Ireland	Ireland	s				2	2	52		
Rivet boy	17	Germany	Germany	s						52		
Boiler maker	31	Scotland	Scotland	s						39	13	no work
Engineer	51	Alaska	Finland	s						52		
Laborer	26	Germany	Germany	s				2	2	39	13	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$780 00		\$780 80	\$780	\$1500						\$2000	1	\$5 00	22		1800
18 50	702 00		702 00	702					free		2000	1	5 00	24		300
15 50	806 00		806 00	806					not an		550	1	4 00	8		600
7 50	282 50	\$800	562 50	550	2500									38	\$100	5000
15 00	780 00		780 00	635	1000			\$100			2000	1	5 00	25		1500
15 00	780 00		780 00	540	1800	\$900	\$120				1250	1	4 00	10		700
9 00	468 00	200	668 00	450	1500	400	150				2500	2	8 00			1800
13 50	702 00		702 00	502	1800		200							31		2200
9 00	468 00		468 00	368				100	‡					7		600
4 50	284 00		284 00							\$3 00						80
10 50	546 00		546 00							3 50						50
2 50	65 00		65 00					*		*						
5 00	130 00		130 00							8 50				4		50
12 00	624 00		624 00					* 200		6 50						650
8 00	156 00		156 00					*		*						
2 50	180 00		180 00					*		*						
8 00	156 00		156 00							8 00				8		25
4 50	284 00		284 00							4 00						150
7 50	890 00		890 00					40		4 00				1½	100	150
7 50	890 00		890 00					20		8 75	1	4 00	20	50		70
4 00	208 00		208 00					*		*						175
13 50	702 00		702 00					30		4 00			4			100
10 00	520 00		520 00	270	3000			250			3000					3500
9 00	450 00		450 00	450					\$8 00							250
12 00	408 00		408 00	408					6 00							50
15 00	195 00		195 00	500					5 00							500
12 00	624 00		624 00	624					8 00							150
4 00	208 00		208 00					10		2 00						
12 00	624 00		624 00							4 00				9	108	125
7 50	292 50		292 50					*		3 50				6	15	40
7 50	375 00		375 00							*				3		25
7 50	830 00		830 00	380	700	350					500	1	4 00	6	27	500
7 50	830 00		830 00	285	900	300	44							6		800
7 50	390 00	400	790 00	640	1200	500	100					1	4 00	18		800
12 00	564 00	250	814 00	700	1400		100					1	5 00	17		1700
7 50	360 00	100	460 00	460					3 50					15		200
24 00	1248 00		1248 00	425	3000	1600	800				1000					1800
15 00	890 00		890 00	390	1600	200					500	1	5 00	19		2000
12 00	624 00		624 00	624	900											1500
15 58	529 72	100	629 72	427				200	8 00		1000			29		750
15 50	744 00		744 00	744	2000	230										2500
7 50	830 00	100	430 00	330	1000			100						9	10	1200
16 50	908 50	100	908 50	908	2000						2000			40		8500
15 58	716 88		716 88	616				100	11 00							250
12 00	624 00	600	1224 00	1000	3000			200			2000					3300
8 00	416 00		416 00	416					6 00		500			10		450
8 00	416 00		416 00	416				*	‡	*				34		1300
4 50	284 00		284 00							*				9		
15 50	604 50		604 50					150		4 00	1000	1	4 00	8	20	1000
12 00	624 00		624 00					180		4 00	500			3		1200
7 00	278 00		278 00							3 00				3		40

* Lives at home and gives wages to parents.

‡ Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Laborer	23	Canada	Canada	s						44	8	no work
Boiler maker	24	U. S.	England	s						52		
Laborer	22	"	Ireland	s						44	8	no work
"	21	Scotland	Scotland	s						44	8	
"	25	Germany	Germany	s						47	5	"
Boiler maker	20	U. S.	Ireland	s						52		
Laborer	16	"	Poland	s						52		
"	29	"	England	s						39	13	no work
Rivet boy	16	Germany	Germany	s						39	13	"
CO-OPERATIVE FOUNDRY CO.												
Molder	21	U. S.	England	m					1	52		
Melter	34	Germany	Germany	m	2	2	1		3	52		
Molder	40	U. S.	Ireland	m	3	3	1		4	52		
"	39	Canada	Canada	m	3	3	2		4	26	26	sick and no work
Laborer	40	Ireland	Ireland	m	4	4	2		5	52		
Molder	50	U. S.	France	m					1	52		
"	22	"	Germany	s				1	1	52		
"	30	"	U. S.	s				2	2	52		
"	25	"	Germany	s				1	1	48	4	sickness
Care maker	25	Ireland	Ireland	s						51	1	vacation
REICHLER BROS.												
Wood worker	29	Germany	Germany	m	2	2			3	46	6	no work
Painter	57	U. S.	France	m	1	1	1		2	46	6	"
Blacksmith	27	"	Germany	m					1	52		
Trimmer	23	"	"	s				1	1	46	6	no work
"	23	"	"	s						39	13	"
Finisher	17	"	U. S.	s						52		
"	16	"	"	s						34	18	no work
Painter	19	"	Germany	s						39	13	"
"	19	"	U. S.	s				1	1	46	6	"
Blacksmith	25	Germany	Germany	s						49	3	"
F. HUETTEMAN & Co.												
Machinist	54	"	"	m	3	3	2		4	52		
Steam fitter	42	U. S.	U. S.	m	2	2			3	52		
"	40	"	Germany	m	4	4	2		5	48	4	no work
Millwright	40	"	U. S.	m	3	3			4	52		
Steam fitter	40	"	"	m				1	2	52		
Engineer	32	Germany	Germany	m	2	2		1	4	52		
Blacksmith	49	"	"	m	7	7	2		8	52		
Pattern maker	24	U. S.	"	m					1	52		
Machinist	18	"	"	s						52		
"	22	"	Switz.	s						52		
"	21	"	Germany	s						52		
"	18	"	"	s						52		
"	18	"	"	s						44	8	no work
"	20	Germany	"	s				2	2	52		
"	16	U. S.	"	s						52		
"	25	"	"	s						52		
Book-keeper	28	"	"	s						52		
Helper	16	"	"	s						26		first work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$330 00		\$330 00					\$70		\$3 50	\$200			1	\$75	\$300
12 00	624 00		624 00					*		4 00						75
7 50	330 00		330 00							3 00						40
7 50	330 00		330 00							3 50				3	10	50
8 25	387 75		387 75											6		100
9 00	468 00		468 00							5 00						75
4 50	234 00		234 00					*		* *						
7 50	292 50		292 50							3 50						45
4 50	175 50		175 50					*		*				10		
9 00	468 00		468 00	\$468					\$10 00							150
13 50	702 00		702 00	702	\$1600									20		2000
18 00	936 00		936 00	936					13 00							4000
15 00	390 00		390 00	390					7 50			1	\$5 00	10		600
9 00	468 00		468 00	468					9 00			1	5 00	16		100
16 50	858 00		858 00							8 00		1	4 00			200
8 25	429 00		429 00	429					†			2	9 00			50
15 00	780 00		780 00	780	2500							2	9 00			2800
15 00	720 00		720 00							5 00		1	5 00			100
9 60	489 60		489 60							4 50	1000	1	5 00	23		100
13 50	621 00		621 00	425	1800	\$1300	\$100							10	50	700
13 50	621 00		621 00	621					5 00							150
9 00	468 00		468 00	468					10 00							240
10 80	460 00		460 00							3 50						100
9 00	351 00		351 00							3 00						100
2 00	104 00		104 00					*		*						
2 00	68 00		68 00					*		*						350
7 00	273 00		273 00					50		3 00						100
9 00	414 00		414 00							3 00						60
12 00	588 00		588 00							4 00				9		75
13 50	702 00	\$300	1002 00	1002					25 00					24		600
13 50	702 00		702 00	500	1200	900	150				2000	1	5 00			1200
13 50	648 00		648 00	648					10 00							450
13 50	702 00		702 00	702					10 00							500
13 50	702 00		702 00	702					8 00							400
12 00	624 00		624 00	575				25	7 00		2000	1	5 00	19		250
12 00	624 00	250	874 00	874	400						2000	1	5 00	21	250	650
12 00	624 00		624 00	624					8 00							200
9 00	468 00		468 00							†						800
12 00	624 00		624 00					150		4 00						400
9 00	468 00	35	504 00							3 00						4000
4 50	234 00		234 00					*		*						
6 00	264 00		264 00					*		*						100
6 00	312 00		312 00							3 00				11		50
4 50	234 00		234 00					*		*						
13 50	702 00		702 00					150		4 00						250
12 00	624 00		624 00					*		4 00						300
3 50	91 00		91 00					*		*						

*Lives at home and gives wages to parents.

†Lives at home and pays no stated amount for board.

‡Lives at home and supports family.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
AMERICAN INJECTOR CO.												
Salesman	41	U. S.	U. S.	m	3	3	1	1	5	48	4	sickness
Brass finisher	23	Canada	England	m					1	52		
Machinist	25	U. S.	U. S.	m					1	51	1	laid off
Pattern maker	38	"	Germany	m	4	4			5	52		
Machinist	53	"	Ireland	m	2	2			3	52		
Brass finisher	25	Germany	Germany	m					1	50	2	no work
Core maker	15	"	"	s						52		
"	16	"	"	s						34	18	no work
"	17	U. S.	"	s						44	8	"
Engineer	23	"	"	s						52		
Stenographer	32	"	U. S.	s						52		
Brass finisher	21	"	Ireland	s						42	10	no work
"	24	England	England	s						52		
Machine hand	15	Canada	U. S.	s						49	3	no work
Brass finisher	21	U. S.	Germany	s						52		
Machine hand	17	Norway	Norway	s						52		
Tool maker	28	U. S.	U. S.	s						52		
MICHIGAN LUBRICATOR CO.												
Brass finisher	22	"	"	m	1	1			2	52		
Foreman	28	Canada	Canada	m	2	2			3	52		
Brass finisher	32	England	England	m	2	2			3	52		
Machine hand	17	Canada	Canada	s						44	8	no work
Brass finisher	18	U. S.	France	s						52		
Machine hand	16	"	Germany	s						52		
Brass finisher	19	Canada	Ireland	s						52		
"	21	Germany	Germany	s						49	3	no work
"	21	England	England	s						52		
"	21	U. S.	Ireland	s						39	13	no work
"	32	Canada	Scotland	s						48	4	accident
Metal polisher	21	U. S.	Ireland	s						52		
"	27	Canada	Scotland	s			2		2	52		
Machine hand	16	U. S.	Germany	s						52		
Brass finisher	24	Canada	Ireland	s						52		
"	21	"	England	s						52		
MURDOCK VALVE CO.												
Machinist	24	England	"	s						52		
Brass finisher	23	Canada	U. S.	s						41	8	no work
Molder	20	U. S.	"	s						34	18	"
Machinist	18	"	Canada	s						52		
Engineer	24	"	U. S.	s						42	10	not ana.
Machinist	37	"	U. S.	m	3	3	1		4	39	13	no work
Pattern maker	35	Canada	"	m	1	1		1	3	49	3	sickness
Laborer	38	Germany	Germany	m	2	2	1		3	26	26	no work
Machinist	50	U. S.	U. S.	m	2	2			1	52		
Book-keeper	27	Canada	"	wt				1	1	52		
HUYETT & SMITH MANN'G CO.												
Tinner	13	U. S.	"	s						52		
Laborer	18	"	Germany	s						35	17	no work
"	19	"	"	s						39	13	"
Molder	21	"	"	s			2		2	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$29 00	\$1892 00	\$1400	\$2792 00	\$800	\$5000		\$1200	\$700			\$7000	1	\$25 00			\$25000
15 00	780 00		780 00	780 00					10 00					11		300
13 50	688 50		688 50	688 50					10 00							600
15 00	780 00		780 00	575	1700	\$1200	120									1100
15 00	780 00		780 00	780 00					10 00							450
12 30	615 00		615 00	450	1400	1000	100							15		700
4 50	234 00		234 00					*		*				10		
9 50	119 00		119 00					*		*				10		
4 00	176 00		176 00					*		*						
12 00	624 00		624 00					200		\$4 00		1	5 00			500
10 00	520 00		520 00							5 00						300
10 00	420 00		420 00							3 50						100
13 50	702 00		702 00					150		4 25				10		300
3 00	147 00		147 00					*		*				10		
7 00	364 00		364 00					*	3 50	*				10		75
4 00	208 00		208 00					*		*				10		
24 75	1287 00	216	1503 00					600		5 00	4000	1	4 00			3500
14 00	728 00		728 00	728					7 00							800
21 00	1082 00		1082 00	1082					14 00		2000			20		1000
15 00	780 00		780 00	780					6 00					7		150
4 00	176 00		176 00					*		*						
6 00	312 00		312 00					*		*						
3 50	182 00		182 00					*		*						
9 00	468 00		468 00					*		5 00				10		75
3 00	147 00		147 00					*		*				5		50
12 00	624 00		624 00					*		*				20		50
13 50	526 50		526 50					*		*						400
15 00	720 00		720 00					75		†						600
9 00	468 00		468 00							4 00						100
12 00	624 00		624 00							4 00				26		50
4 00	208 00		208 00							2 50						
13 50	702 00		702 00					50		4 50		1	5 00	11½		100
13 00	676 00		676 00							5 00	2000	1	5 00	3	\$100	150
12 00	624 00		624 00					50		3 75				18		350
12 00	528 00		528 00							4 00				10		250
10 50	357 00		357 00					*		*						100
5 00	260 00	60	320 00					25		8 00						700
6 00	252 00		252 00							4 00						50
15 00	585 00		585 00	585					12 00							400
13 50	661 50		661 50	300	1800	800	300							30		2000
9 00	234 00		234 00	234	1000	800					72			8		400
12 00	624 00	48	672 00	672					13 00							600
9 00	468 00		468 00							4 00	8000	1	4 00	8	100	300
3 00	156 00		156 00					*		*						
4 50	157 50		157 50					*		*						
4 50	175 50		175 50					*		*	125					
9 00	468 00		468 00	468						†		1	5 00			125

* Lives at home and gives wages to parents.

† Lives at home and supports family.

† Lives at home and pays no stated amount for board.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Steam fitter.....	22	U. S.	U. S.	s						50	2	no work
Tinner.....	42	"	"	s						52		
Pattern filer.....	23	"	"	s						51	1	not ans
Pattern fitter.....	26	England.	England	s				1	1	52		
Molder.....	18	U. S.	U. S.	s						42	10	burnt
".....	21	"	Germany	s						52		
Foreman.....	27	"	Ireland	s				2	2	51	1	no work
Teamster.....	27	Ireland	"	s						52		
Machinist.....	35	U. S.	Germany	m	3	3	3		4	52		
".....	45	"	U. S.	m					1	52		
".....	32	"	Germany	m	4	4	1		5	52		
".....	27	England.	England	m	1	1			2	52		
Steam fitter.....	24	U. S.	Germany	m				2	3	47	5	sick and no work
".....	31	Ireland	Ireland	m					1	49	3	no work
Molder.....	27	U. S.	"	m	1	1		1	3	51	1	sickness
".....	24	"	"	m	1	1			2	39	13	no work
".....	24	"	Germany	m					1	52		
Carpenter and joiner.....	65	"	U. S.	m	4	1	1		2	52		
Foreman.....	41	Germany	Germany	m	3	3	3		4	52		
Tinner.....	28	U. S.	U. S.	m	1	1			2	52		
".....	34	"	"	m	2	2			3	52		
Foreman.....	48	"	"	m	4	3			3	52		
GRAY BROS.												
Carriage trimmer.....	27	"	"	s				3	3	52		
Painter.....	22	England.	England	s				1	1	52		
".....	34	U. S.	France	s				1	1	44	8	no work
Blacksmith.....	35	"	England	s						52		
".....	22	Germany	Germany	s				1	1	39	13	no work
Painter.....	20	U. S.	"	s						49	3	
Engineer.....	65	Scotland	Scotland	m	9	1			2	52		
Blacksmith.....	40	U. S.	Canada	m	1	1	1		2	46	6	sick and no work
".....	29	Canada	"	m	2	2			3	52		
Wood worker.....	35	Germany	Germany	m	5	5	4		6	52		
".....	39	U. S.	"	m	1	1			2	52		
".....	48	"	U. S.	m					1	52		
Painter.....	29	Canada	"	m	2	2		1	4	52		
E. CHOPPE & SONS.												
Painter.....	18	Germany	Germany	s						49	3	no work
".....	20	U. S.	"	s						52		
Engineer.....	44	England.	England	m	5	5	3		6	52		
Blacksmith.....	32	Germany	Germany	m	1	1			2	49	3	no work
Blacksmith helper.....	29	"	"	m	4	4			5	52		
".....	35	"	"	m	1	1			2	52		
Wook worker.....	31	"	"	m					1	52		
".....	52	Canada	Canada	m	5	2	1		3	52		
".....	40	U. S.	Germany	m	3	3			4	52		
Blacksmith.....	46	France	France	m	3	3	1		4	52		
THE AMERICAN STOVE CO.												
Laborer.....	15	Canada.	Canada	s						50	2	no work
Stove mounter.....	24	"	"	s						48	4	"
Laborer.....	30	U. S.	Ireland	s						35	17	"
Stove mounter.....	26	"	Germany	s				2	2	35	17	"

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$3 00	\$450 00		\$450 00							\$3 00		1	\$5 00		\$50
15 00	780 00		780 00					\$100		3 50					200
9 00	459 00		459 00					70		3 50	\$4000	2	20 00		300
15 00	780 00		780 00	\$730				50	\$8 00					9	250
6 00	253 00		253 00							2 50					
9 00	468 00		468 00							3 50		1	5 00		200
15 00	765 00		765 00	580	\$2000	\$250	\$160			3 50					2000
9 00	468 00		468 00					200		3 50					1500
14 00	723 00		723 00	728				250	8 00						600
12 00	624 00		624 00	374					7 00						600
13 50	702 00		702 00	702	1000						2000				1500
10 50	546 00		546 00	546					10 00					8	\$85
8 00	376 00		376 00	376					free						600
9 00	441 00		441 00	225	2500	1250	150				2000	2	10 00	9	200
10 50	535 50		535 50	535					5 00						1800
12 00	468 00		468 00	344				100	6 00						150
9 00	468 00		468 00	468					6 00			1	5 00		500
10 50	546 00	\$144	690 00	480				100	10 00		200				300
17 00	884 00		884 00	884					12 50					21	1000
9 00	468 00		468 00	468					9 00						300
12 00	624 00		624 00	624					10 00						150
20 00	1040 00	48	1088 00	600	3000	60	60	400			2000				4000
13 50	702 00	80	782 00					356		4 00					2500
12 00	624 00		624 00					50		5 00				8	100
10 50	462 00		462 00							4 50					50
10 00	520 00		520 00							4 00					75
8 00	312 00		312 00							3 50				7	50
10 50	514 50		514 50					50		4 00					50
12 00	624 00		624 00	624	3000									35	10
15 00	660 00	108	796 00	796	2000	250	200				2000				3000
15 00	780 00		780 00	520	1800	600					2000	1	5 00	22	1400
8 00	447 20		447 20	447	1200	400					2000	1	10 00	7	1000
12 00	624 00		624 00	624	2000	800									1500
15 00	780 00		780 00	780					16 00						600
14 00	728 00		728 00	728					16 00					25	400
9 00	441 00		441 00							3 50				16	
9 00	468 00		468 00							5 00					40
12 00	624 00		624 00	624	1100	200			10 00		1250	2	9 00	20	150
13 50	661 50		661 50	661							2000	1	5 00	8	200
7 20	374 40		374 40	374					6 00			1	5 00	10	11
9 00	468 00		468 00	268	1200	400	200					1	5 00	8	1800
12 00	624 00		624 00	480	1400	600		100						27	1400
12 00	624 00		624 00	624	1500							1	5 00	26	5000
12 00	624 00		624 00	624					8 00		2000	1	5 00		400
18 00	936 00		936 00	936	2000						2500	1	9 00	36	2500
4 50	225 00		225 00					*		*				5	
13 00	624 00		624 00					50		4 00				5	25
12 00	420 00		420 00							4 00		1	5 00		50
12 00	420 00		420 00							4 00					45

* Gives wages to parents and lives at home.

TABLE No. 1.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	43	U. S.	U. S.	m	1	1			2	35	17	no work
"	31	England	England	m					1	30	22	" "
"	26	U. S.	U. S.	m	2	2			3	46	6	" "
"	44	Canada	Canada	m	2	1	5		8	51	1	" "
"	32	U. S.	U. S.	m	2	1			3	40	12	" "
Cupola tender.	26	Ireland	Ireland	m					1	48	4	" "
Molder	56	U. S.	U. S.	m	1				1	26	26	" "
"	32	Ireland	Ireland	m				1	2	35	17	" "
AMERICAN HARROW CO.												
Wood worker	26	England	England	s						52		
Laborer	18	U. S.	U. S.	s						50	2	not ans.
"	21	"	"	s						50	2	no work
Painter	28	"	"	s				2	2	52		
Wood worker	22	"	"	s						52		
Laborer	28	"	"	s						52		
Wood worker	29	"	England	wr	1	1			1	39	13	no work
Machine hand	36	Scotland	Scotland	s				1	1	52		
Painter	18	U. S.	U. S.	s						52		
Engineer	42	"	"	m	2	1	1		2	52		
Foreman	39	"	"	m	5	3	2		4	52		
Laborer	40	Germany	Germany	m	1				1	52		
Painter	54	U. S.	U. S.	m	5	2	1		3	52		
"	39	"	"	m	4	4	3		5	50	2	no work
"	32	"	"	m	2	1	2		5	52		
"	23	Germany	Germany	m	2	2			3	50	2	shut down
"	22	England	England	m					1	26	26	no work
Wood worker	52	Canada	Germany	m	3	1	1		2	52		
Teamster	35	"	Canada	m	5	5	4		6	52		
Wood worker	43	U. S.	U. S.	m	1				1	32	20	no work
"	49	Canada	England	m	11	11	5		12	52		
Machinist	31	Germany	Germany	m	2	2			3	52		
PENBERTHY INJECTOR CO.												
Brass molder	28	U. S.	U. S.	m	2	2	1		3	48	4	sickness
Core maker	37	"	Germany	m					1	52		
Brass finisher	29	"	Ireland	m	1	1			2	46	6	no work
Tool maker	28	"	U. S.	m					1	52		
Engineer	38	England	England	m	2	2	1		3	52		
Core maker	17	U. S.	U. S.	s						52		
Brass molder	22	"	Scotland	s						52		
Metal polisher	21	"	Ireland	s						52		
Brass finisher	18	"	"	s						52		
"	17	"	U. S.	s						30	22	no work
"	22	Scotland	Scotland	s						52		
"	28	U. S.	Ireland	s						52		
"	18	"	England	s						47	5	no work
"	30	"	Ireland	s						52		
"	21	"	"	s						52		
"	17	Scotland	Scotland	s			1	1	1	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$315 00	\$300	\$615 00	\$615					\$10 00							\$300
10 50	315 00		315 00	315										25		150
12 50	575 00		575 00	575					10 00							300
14 00	714 00		714 00	650	\$1000	\$300	\$25				\$1000	1	\$5 00	20		1000
15 00	600 00	350	950 00	950					10 00		2000	1	5 00			700
10 50	504 00		504 00	504					6 50					23		500
15 50	403 00		403 00	403					10 00		2500					400
9 00	315 00		315 00	250	600	250	50				2000	1	5 00			700
13 25	689 00	12	701 00					\$250		\$4 00	2075	1	5 00	8	\$125	2000
7 50	375 00		375 00							3 50						150
10 50	525 00		525 00							4 00						100
10 50	546 00		546 00	460				80	7 00							350
9 00	468 00		468 00							3 00						100
9 00	468 00		468 00							3 50						400
10 50	409 50		409 50					110		4 50						1650
12 00	624 00		624 00							4 00	2000					
7 50	390 00		390 00							3 00						150
13 50	702 00		702 00	702					11 50		2000					500
19 20	998 40		998 40	998					13 00		2000					1500
9 00	468 00		468 00	468					10 00		2000	1	10 00	36		300
13 00	780 00		780 00	780					12 00		2000					600
10 50	525 00		525 00	525					5 00		2000					200
10 50	546 00		546 00	546					10 00			1	5 00			600
10 50	525 00		525 00	525					5 00		1000				15	500
10 00	260 00	300		560					8 00						3	500
13 50	702 00		702 00	540				100	13 00						12	800
11 00	572 00		572 00	525					10 00						5	800
10 00	320 00	48	368 00	300	650				12 00							800
9 00	468 00	250	718 00	718					7 00						25	150
12 00	624 00		624 00	624					5 00		2000				20	400
15 00	720 00	300	1020 00	1020					10 00							300
10 50	546 00		546 00	546					9 00							50
12 00	552 00		552 00	552					8 00							300
15 00	780 00	20	800 00	650				100	12 00			1	5 00			1500
12 00	624 00		624 00	624					10 00			1	5 00		5	200
6 00	312 00		312 00					*		*						200
12 00	624 00		624 00							3 00						75
7 50	390 00		390 00					*		*						75
6 00	312 00		312 00					*		*						
3 00	90 00		90 00					*		*						
12 00	624 00		624 00						4 00					4	125	100
24 00	1248 00		1248 00					650		5 00						1500
6 00	282 00		282 00					20		4 00						100
12 00	624 00		624 00					*		*						150
15 00	780 00		780 00							5 00						200
7 50	390 00		390 00						6 00					8		

* Lives at home and gives wages to parents.

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
PHOENIX WIRE WORKS.												
Wire worker	36	U. S.	U. S.	m	1	1	1		2	44	8	sick and vacation
Wire worker	36	"	"	m	3	3	1		4	52		
Wood worker	40	"	"	m					1	52		
Packer	37	"	"	m					1	34	18	no work
Wire weaver	34	Germany	Germany	m				2	3	44	8	"
Bobbin winder	17	"	"	s						34	18	"
Wire worker	15	U. S.	U. S.	s						44	8	"
Wood worker	26	Germany	Germany	s						52		
Finisher	19	"	"	s						49	3	no work
Wire weaver	18	"	"	s						50	2	"
"	20	"	"	s						52		
"	30	U. S.	"	s						26	26	no work
Bobbin winder	17	"	"	s						39	13	"
"	19	"	"	s						39	13	vacation
Painter	14	"	"	s						13		first work
Wire weaver	28	"	"	s						49	3	no work
MICHIGAN ELEVATOR AND ENGINE CO.												
Machinist	32	Canada	England	m					1	52		
Blacksmith	51	U. S.	U. S.	m	1	1			2	39	13	no work
Wood worker	44	"	"	m	1	1			2	52		
Laborer	39	"	England	m	1	1			2	39	13	sickness
Wood worker	25	"	U. S.	m	1	1			2	45	7	accident
Pattern maker	60	"	"	m	3				1	52		
Machinist	58	England	England	m	8	6	5		7	52		
"	48	Germany	Germany	m	8	8	3		9	39	13	no work
"	36	U. S.	"	m				1	2	52		
Millwright	45	"	U. S.	wt	2	2	2		2	52		
Machinist	27	"	Germany	s						52		
Helper	20	"	England	s						52		
Pattern maker	33	Canada	Scotland	s				1	1	52		
Asst. sup't	21	U. S.	U. S.	s						52		
Book-keeper	17	"	Germany	s						12		first work
Machinist	24	"	"	s						52		
"	18	England	England	s						52		
"	21	U. S.	Ireland	s						52		
"	23	"	Germany	s						30	22	no work
"	18	"	U. S.	s						47	5	accident
"	30	France	France	s				1	1	52		
KAHL & CO.												
Machinist	60	U. S.	U. S.	m	5	1	1		2	52		
Melter	37	England	England	m	2	2	2		3	39	13	no work
Molder	52	U. S.	Ireland	m	4	1	1		2	34	18	"
"	34	Canada	Germany	m	5	5	2	1	7	50	2	"
"	58	"	U. S.	m	3				1	52		
Core maker	28	"	Canada	m	1	1			2	52		
Molder	33	U. S.	Germany	m	5	5	3	1	7	52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Income.				Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other source.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$15 00	\$360 00		\$360 00	\$300					\$8 00						\$450
9 00	468 00		468 00	468					8 50						200
13 50	702 00		702 00	702					10 00						900
7 50	255 00		255 00	255					7 00						200
8 40	369 60		369 60	389					6 00		\$1000			23	360
3 00	102 00		102 00					*		*				8	
3 50	154 00		154 00												
10 50	546 00		546 00						no ans						300
5 50	269 50		269 50					\$50	\$3 50						100
4 50	225 00		225 00					*			200			16	
9 00	468 00		468 00					*			245			19	50
8 00	208 00		208 00							3 50					36
3 00	117 00		117 00					*		*					
3 00	117 00		117 00							2 00					25
2 50	32 50		32 50					*		*					
12 00	588 00		588 00					70		4 00					200
12 00	624 90		624 00	624					10 00			1	\$5 00	12	\$30
10 50	409 50		409 50	409					8 00						700
15 00	780 00	\$168	948 00	650	\$1800	\$200	\$250				4000	1	10 00		200
6 00	234 00		234 00	234											3500
12 00	540 00		540 00	540	1800										2000
15 00	780 00	300	1080 00	550	4000		800	200							7500
12 00	624 00	400	1024 00	1024					14 00					4	300
12 00	468 00	650	1118 00	750	1200	600	300				500	1	5 00	21	1000
10 50	546 00		546 00	546					15 00						700
16 50	858 00		858 00							6 50	1500				200
10 50	546 00		546 00					50	no ans						100
7 50	390 00		390 00					50	4 00						100
16 00	780 00		780 00						5 00	2000		1	10 00	14	1000
15 00	780 00		780 00					200	5 00						5000
4 00	48 00		48 00					*	*						
13 50	702 00		702 00					175	4 50						250
6 25	325 00		325 00					*	*					3	
9 00	468 00		468 00					*	*						40
10 50	815 00		815 00					25	3 50						125
3 00	141 00		141 00					*							
12 00	624 00		624 00						7 00			2	10 00	24	100
15 00	780 00	420	1200 00	1200					25 00		2000				2500
10 50	409 50		409 50	409					8 00		2000	2	10 00	20	200
9 00	306 00		306 00	306					10 00						700
14 50	725 00		725 00	650				70	9 00			1	4 00	1	600
13 50	702 00		702 00	702					14 00		2000			39	500
10 00	520 00		520 00	300	1000	350	200				85	1	5 00	6	900
18 00	936 00		936 00	936					14 00		2000	1	5 00		2000

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	25	England	England	m	1	1			2	43	9	no work
Machinist	70	U. S.	U. S.	wr	1					52		
Molder	58	"	England	wr	3					52		
Laborer	20	"	U. S.	s						26	26	no work
Machinist	17	"	Germany	s						52		
Laborer	22	Canada	Canada	s						34	18	no work
Molder	30	U. S.	Ireland	s						37	15	
"	20	Scotland	Scotland	s						39	13	"
"	31	U. S.	U. S.	s				1	1	52		
"	22	Germany	Germany	s						39	13	no work
CHARLES RHODE.												
Blacksmith	30	"	"	m	1	1			2	52		
"	30	"	"	m	1	1			2	44	8	sickness
Wood worker	44	"	"	m	6	6	3		7	52		
Trimmer	28	U. S.	England	m	7	4	3		5	44	8	no work
Painter	34	Germany	Germany	m	2	2			3	52		
Wagon maker	45	"	"	m	1				1	22	30	no work
"	43	"	"	m	7	7	4		8	52		
Painter	15	Canada	"	s						52		
Laborer	18	Germany	"	s						26		first work
Painter	16	U. S.	"	s						52		
"	15	"	"	s						52		
Blacksmith	19	Germany	"	s						52		
Laborer	16	U. S.	"	s						52		
J. MICHELS MACHINE WORKS.												
Machinist	38	U. S.	Scotland	m					1	48	4	laid off
"	33	Germany	Germany	m	3	3			4	52		
"	42	U. S.	U. S.	m	2	2	2		3	52		
Blacksmith	34	Denmark	Denmark	m	4	4	2		5	52		
Pattern maker	30	England	England	m					1	48	4	no work
Machinist	19	U. S.	U. S.	s						52		
Machine hand	19	"	"	s						52		
Machinist	20	"	Ireland	s						52		
"	21	"	"	s						52		
Machine hand	20	"	Germany	s						52		
"	20	"	"	s						52		
"	21	"	"	s						52		
"	20	"	U. S.	s						52		
E. T. BARNUM.												
Iron worker	54	England	England	m					1	44	8	no work
"	27	France	France	m	2	2		1	4	48	4	"
Wire worker	26	U. S.	Germany	m	1	1		1	3	26	26	
Iron worker	28	Canada	Canada	m	2	2		1	4	46	6	sickness
Wire worker	26	U. S.	Holland	m	1	1			2	52		
"	24	Canada	U. S.	wr	1	1			1	50	2	sickness
"	24	England	England	s				1	1	52		
Blacksmith	21	Canada	Canada	s						52		

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total Annual income.		If owing home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$580 50		\$580 50	\$580					\$7 00					20		\$450
9 00	468 00		468 00	468					7 00			1	\$5 00			
15 00	780 00		780 00					\$150		\$4 00						400
7 50	195 00		195 00					*		*						50
3 00	156 00		156 00					*		*						
7 50	255 00		255 00							3 50				11 1/2		45
13 50	499 50		499 50							4 58		1	5 00			200
13 50	526 50		526 50							4 00				3		200
15 00	780 00		780 00							7 50		1	5 00			50
7 50	292 50		292 50							3 50	\$117			8		75
12 00	624 00	\$500	1124 00	600	\$8000			500						16		6250
10 00	440 00		440 00	440	1000	\$500								7		700
9 00	468 00		468 00	468	1800	200						1	5 00	21		1800
12 00	528 00		528 00	538	1000	500										1000
12 00	624 00		624 00	424				200	7 00					15		500
7 00	154 00		154 00	250	1000	600					1000	1	5 00	36		900
9 00	468 00	300	768 00	768	1800	600					1000	1	5 00	17	1000	1300
3 30	169 00		169 00					*		*				8		
2 25	95 50		95 50					*		*				5		
3 50	182 00		182 00					*		*						
2 00	104 00		104 00					*		*						
6 00	312 00		312 00					*		3 00				3		100
4 00	208 00		208 00					*		*						
14 25	684 00		684 00	484	1200			200								2000
15 00	780 00		780 00	650				80	8 00		2000	3	15 00	21		300
15 00	780 00		780 00	730					16 00		2000					400
12 00	624 00		624 00	624	1400	650						1	9 00	18		1000
12 50	648 00		648 00							4 00		1	2 50	8	250	250
6 00	312 00		312 00					*		*						100
4 00	208 00		208 00							2 00						100
5 00	260 00		260 00							3 00						50
6 00	312 00		312 00							4 00						30
5 00	260 00		260 00							4 00						200
6 00	312 00		312 00				15 00			†						100
6 00	312 00		312 00				*			†						75
3 50	182 00		182 00							3 00						25
7 50	330 00		330 00	330					7 00		50			12		50
10 00	480 00		480 00	480					4 00					6		200
9 50	247 00		247 00	247					9 50							250
9 00	414 00		414 00	414					6 50		2000	1	10 00	9		150
12 50	650 00		650 00	650					7 00							400
12 00	600 00		600 00							5 00	75	1	5 00	23		200
12 00	624 00		624 00	474	1500	1200	\$150			*	3000	2	15 00	11		600
11 00	572 00		572 00				*			*				9		75

* Lived at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE NO. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Tinner	20	Canada	England	s	—	—	—	—	—	52	—	—
Wire worker	18	U. S.	Ireland	s	—	—	—	—	—	52	—	—
"	19	"	"	s	—	—	—	—	—	52	—	—
"	20	Canada	England	s	—	—	—	—	—	52	—	—
Helper	20	U. S.	Germany	s	—	—	—	—	—	52	—	—
Wire worker	22	"	Austria	s	—	—	—	—	—	52	—	—
Iron worker	48	England	England	s	—	—	—	1	1	52	—	—
"	27	U. S.	Germany	s	—	—	—	—	—	52	—	—
"	21	"	"	s	—	—	—	—	—	52	—	—
Painter	23	"	"	s	—	—	—	—	—	49	3	sickness
BYRAM & Co.												
Laborer	28	Germany	"	m	1	1	—	—	2	52	—	—
"	25	Canada	Canada	m	4	4	3	—	5	8	—	first work in U. S.
Machine hand	67	Scotland	Scotland	m	5	—	—	—	1	52	—	—
Pattern maker	26	England	England	m	—	—	—	—	1	52	—	—
Blacksmith	37	Germany	Germany	m	—	—	—	—	1	52	—	—
Helper	33	U. S.	U. S.	m	1	1	—	—	2	52	—	—
Blacksmith	64	Canada	England	m	5	2	—	—	3	26	—	first work in U. S.
Helper	47	"	Canada	m	3	3	1	—	4	52	—	—
Boiler maker	57	Ireland	Ireland	m	3	—	—	—	1	4	48	no work
Laborer	47	Germany	Germany	m	7	5	3	—	6	52	—	—
Boiler maker	26	Scotland	Scotland	m	—	—	—	—	1	34	18	no work
Machinist	48	England	England	m	3	1	—	—	2	52	—	—
Laborer	28	U. S.	U. S.	m	—	—	—	—	1	52	—	—
Marine engineer	30	"	"	m	1	1	—	—	2	52	—	—
Carpenter	2	Canada	Canada	s	—	—	—	—	—	52	—	—
Machine hand	16	U. S.	Germany	s	—	—	—	—	—	52	—	—
Iron worker	23	"	"	s	—	—	—	2	2	52	—	—
Rivet boy	16	Canada	Canada	s	—	—	—	—	—	34	18	no work
Laborer	18	Germany	Germany	s	—	—	—	—	—	48	4	"
Blacksmith	24	Canada	Canada	s	—	—	—	—	—	16	—	first work in U. S.
Shipping clerk	17	Scotland	Scotland	s	—	—	—	—	—	52	—	—
GRAHAM TWIST DRILL CO.												
Machine hand	48	U. S.	"	m	—	—	—	—	1	32	20	not answered
Helper	36	England	England	m	—	—	—	—	1	22	80	no work
Machinist	38	Scotland	Scotland	m	1	1	—	—	2	52	—	—
"	31	England	England	m	—	—	—	—	1	52	—	—
"	37	U. S.	U. S.	m	2	2	1	—	3	39	13	no work
Blacksmith	42	Canada	England	m	4	4	2	—	5	52	—	—
Engineer	32	U. S.	Germany	m	2	2	—	—	3	52	—	—
Machinist	42	"	U. S.	m	3	3	1	—	4	52	—	—
"	33	"	England	m	5	5	3	—	6	58	—	—
Grinder	17	Canada	U. S.	s	—	—	—	—	—	34	18	no work
Machinist	29	Scotland	Scotland	s	—	—	—	—	—	52	—	—
"	45	Norway	Norway	s	—	—	—	1	1	49	3	no work

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born. No. of years in United States.	If foreign born. amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$7 50	\$390 00		\$390 00							\$3 50				15	\$25
6 00	312 00		312 00							3 00					
6 00	312 00		312 00					*		*					
6 00	312 00		312 00					\$20		3 00				18	100
6 00	312 00		312 00							3 50					40
9 00	468 00		468 00					60		3 50					100
9 00	468 00		468 00					50		3 00				8	100
12 00	624 00		624 00					50		5 00					100
9 00	468 00		468 00							4 50					80
9 00	441 00		441 00							4 00					208
7 50	390 00		390 00	\$390					\$5 00		\$1000	1	\$5 00	9	\$25
7 50	60 00		60 00	60					5 00			1	4 00	2 mo	6
9 00	468 00		468 00	468					8 00					39	1500
12 00	624 00		624 00	624					9 00			1	5 00	6	6
12 00	624 00		624 00	624					10 00		500			35	500
7 50	390 00		390 00	390					6 00						150
12 00	312 00	\$150	462 00	462					12 00					14	75
8 00	416 00	500	916 00	916					7 50					21	300
10 50	42 00	420	462 00	462	\$2000									47	6000
11 25	585 00		585 00	585	1800							1	5 00	22	2250
12 00	408 00		408 00	408					8 00					18	300
8 00	416 00	72	488 00	488					11 00			1	5 00	12	300
7 50	390 00		390 00	390						6 00					200
24 50	1274 00	84	1358 00					550		5 50	2000				4100
12 00	624 00		624 00							3 50				2	500
4 00	208 00		208 00					*		*					
9 00	468 00		468 00					100		3 00					150
3 00	102 00		102 00					*		*					
7 50	390 00		390 00					*		*				8	
10 50	168 00		168 00					50		3 50				4	25
5 00	260 00		260 00					*		*				10	200
9 00	288 00		288 00	288					10 00						300
9 00	198 00		198 00	225					8 00					17	100
15 00	780 00		780 00	525	1500	\$400	\$200				2000			10	1600
18 00	636 00	360	1296 00	600	3000						2000	1	15 00	14	3600
9 00	351 00		351 00	351					8 00						100
15 00	780 00		780 00	500					11 00		3000	1	5 00	27	500
15 00	780 00		780 00	780					9 00		2000	1	5 00		700
19 25	1000 00	180	1180 00	900				200	12 00		1800				4000
13 50	702 00		702 00	702	800	250					5000				800
6 75	229 50	72	301 50							3 50				2	600
15 00	780 00	100	880 00					200		4 00	1000	1	5 00	9	2500
13 50	661 50		661 50					300		4 00				17	1000

* Lives at home and gives wages to parents.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides Wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
W. R. COLE.												
Machinist.....	44	Germany	Germany	m	6	6	4		7	52		
".....	31	"	"	m	10	12			9	52		
Brass finisher.....	27	U. S.	"	m	3	3			4	52		
Machinist.....	35	Germany	"	m	6	6	3		7	52		
".....	47	France	France	m	9	7	4		8	32	20	sickness
Laborer.....	16	U. S.	Poland	s						52		
Machine hand.....	16	Germany	Germany	s						52		
Tool maker.....	31	U. S.	Ireland	s						52		
Machinist.....	22	Germany	Germany	s				1	1	52		
Metal polisher.....	20	Canada	Canada	s						44	8	no work
".....	28	U. S.	Germany	s						52		
DETROIT SAW WORKS.												
Saw maker.....	50	England	England	m	5	4	3		5	36	22	no work
".....	28	U. S.	Germany	m					1	52		
Engineer.....	41	France	France	m	4	2	1		3	52		
Book-keeper.....	23	U. S.	U. S.	m	1	1			2	52		
Laborer.....	27	Germany	Germany	m					1	52		
Grinder.....	28	"	"	m	1	1			2	46	6	no work
Saw maker.....	28	U. S.	"	s						52		
Laborer.....	28	Germany	"	s						39	13	no work
JOSEPH N. SMITH.												
Metal polisher.....	40	U. S.	U. S.	m	8	3	1	2	6	52		
Machinist.....	38	Canada	"	m	4	4	2	1	6	52		
Plater.....	23	U. S.	"	m	1	1			2	52		
Metal polisher.....	26	Germany	Germany	m					1	52		
Book-keeper.....	20	U. S.	U. S.	s						52		
Laborer.....	18	"	"	s						39	13	no work
Metal polisher.....	19	Canada	Canada	s						52		
MICHIGAN MANUFACTURING Co.												
Pattern maker.....	43	England	England	m	6	4	3		5	52		
".....	46	U. S.	U. S.	m					1	48	4	no work
Shipping clerk.....	26	"	"	m	1		1		2	44	8	"
Pattern maker.....	41	England	England	m	2	2	2	1	4	52		
Machine hand.....	18	U. S.	U. S.	s						52		
".....	16	"	England	s						34	18	no work
Pattern maker.....	19	"	U. S.	s						26	26	"
ENTERPRISE MACHINE WORKS.												
Machinist.....	58	England	England	m	4				1	52		
".....	53	Scotland	Scotland	m	5				1	52		
".....	36	U. S.	England	s						52		
".....	20	"	Canada	s						52		
Book-keeper.....	25	"	U. S.	s						52		
Machine hand.....	18	Germany	Germany	s						52		
THEUT & LUTZ.												
Blacksmith.....	51	"	"	m	5	5	2		6	52		
Wood worker.....	44	"	"	m				1	2	52		
Trimmer.....	36	U. S.	"	m	3	3			4	44	8	no work
Painter.....	44	"	"	m	5	3	2		4	42	10	"
".....	50	"	U. S.	m	8	8	3		9	44	8	"
Blacksmith.....	38	Germany	Germany	m	4	4	2		5	50	2	no work
Trimmer.....	18	Canada	England	s						52		
Painter.....	24	U. S.	Canada	s				2	2	26	26	no work
".....	17	Germany	Germany	s						26	26	"
".....	16	U. S.	Poland	s						52		
Clerk.....	20	"	U. S.	s						52		

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount saved aside from payments on home.	Amount paid on home during the year.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$21 00	\$1092 00		\$1092 00	\$775	\$2500	\$1200	\$200				\$2000	2	\$10 00	20	\$300	\$1500
12 00	624 00		624 00	624	1800	700								10	100	800
16 50	858 00		858 00	858	900	600					2000	1	5 00			400
12 00	624 00		624 00	624										7		200
15 00	490 00	\$125	605 00	605					\$8 00		500			19	200	150
2 00	104 00		104 00					*		*						
4 00	208 00		208 00					*		*						
16 50	858 00	244	1102 00					\$350		\$4 00				8		3500
7 50	390 00		390 00					100		3 50				12		250
5 00	220 00		220 00					*						2		25
13 50	702 00		702 00							4 00						200
18 00	540 00		540 00	540					10 00		2000	1	5 00	26		400
18 00	986 00		986 00	986	3500											4000
18 50	702 00		702 00	702					12 00		1000			30		400
15 00	780 00		780 00	780					12 00		2000	1	10 00			500
7 50	390 00		390 00	390					3 00					6		200
10 50	438 00		438 00	438					7 50			1	15 00	9		200
15 00	780 00		780 00					100		5 00				3		350
7 00	278 80		278 80					50		3 00					50	250
12 00	624 00	150	774 00	574				200	10 00			1	5 00			3000
18 50	982 00		982 00	900				100	18 00		3500			2		400
12 00	624 00		624 00	624					8 00		180					300
10 00	520 00		520 00	520					6 00					9		500
9 00	468 00		468 00													125
4 00	156 00		156 00							4 00						150
7 50	390 00		390 00							3 00				1		30
21 00	1092 00	100	1192 00	1192					18 00					35		500
15 00	720 00		720 00	720					8 00							1000
15 00	660 00		660 00	660					12 00		2000					600
21 00	1092 00		1092 00	1092					14 00					35		1000
7 00	364 00		364 00					70		†						200
7 00	238 00		238 00					90		†						200
7 50	196 00		196 00					15		†						50
15 00	780 00		780 00	780	2000						2000	1	5 00	27		3000
15 00	780 00	100	880 00	880	2500	500					3500	1	4 00	30	500	4500
15 00	780 00	200	980 00					500				2	19 00			6000
7 50	390 00		390 00							5 00						100
9 00	468 00		468 00					140		4 00						250
8 00	156 00		156 00					*		3 00				17		
13 50	702 00		702 00	702	1500									22	200	1750
10 00	520 00		520 00	500	1000	100	20							25		1200
12 00	528 00	96	624 00	624	1800	550					150					1500
13 50	567 00	300	867 00	767	2500		100									3000
12 00	528 00	350	878 00	878	2000	500					2000	1	10 00			2000
10 00	500 00		500 00	500	1200										150	1500
6 00	312 00		312 00					*		*		1	5 00	1		
10 50	273 00		273 00					*		*						75
3 00	78 00		78 00					*		4 00				1½		
3 50	182 00		182 00					*		*						
8 00	416 00		416 00							4 50						100

* Gives wages to parents and lives at home.

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
	Age.	Where born (country).		Nativity of parents.	No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.		No. of weeks worked.	No. of weeks lost.
MARDIAN BROS.											
Blacksmith	43	Germany	Germany	m	6	6	2	7	52		
Wood worker	45	Switz.	Switz.	m	4	4	3	5	52		
Helper	15	U. S.	Germany	s					52		
Painter	22	"	"	s				4	4	45	7
											no work
Trimmer	24	Germany	"	s					44	8	
Painter	16	U. S.	"	s					39	13	
Finisher	23	"	"	s				1	1	52	
Painter	17	Germany	"	s						47	5
											no work
MOULURE & ELLIOTT.											
Wire worker	26	Holland	Holland	m	2	2		3	52		
"	19	U. S.	Germany	s				1	1	48	4
"	21	Germany	"	s					52		sickness
"	17	U. S.	"	s					44	8	no work
"	15	"	U. S.	s					48	4	"
"	18	"	Ireland	s					14	8	sickness
"	16	Germany	Germany	s					44	8	no work
"	20	U. S.	"	s				1	1	52	

TABLE No. 1.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$624 00	\$200	\$824 00	\$824 520					\$10 00		\$2000	1	\$5 00	20		\$450
10 00	520 00		520 00	520					6 00	*	500	1	5 00	6½		200
8 00	156 00		156 00					*				1	5 00			
10 00	450 00		450 00							\$4 00						100
13 50	594 00		594 00							3 50	1000	1	5 00	16		250
3 50	136 50		136 50					*								
7 50	390 00		390 00					*		4 00						50
8 00	141 00		141 00					*		*				6		
9 00	468 00		468 00	468					7 00		160			7		300
9 00	432 00		432 00	432					7 00							100
7 50	390 00		390 00					*		3 50				20		50
4 00	176 00		176 00					*		*						
8 00	144 00		144 00					*		*						
4 00	176 00		176 00					*		*						
3 50	154 00		154 00					*		*				6		
9 00	468 00		468 00						5 00	200	1	5 00				60

* Lives at home and gives wages to parents.

DETROIT.

Three thousand nine hundred and twenty employes were canvassed: Enterprise Machine Works, 6; Michigan Manufacturing Co., 7; Joseph N. Smith (manufacturer of carriage name plates and dash and line rails), 7; Detroit Saw Works (manufacturers of saws), 8; Mardian Bros., 8; McClure & Elliot (manufacturers of wire and iron work), 8; W. H. Anderson & Son (manufacturers of stone, marble and granite workers' tools and supplies, building, sewer and paving contractors' tools and supplies), 9; The Easy Wagon Gear Co., 9; Coöperative Foundry Co., 10; Reichle Bros., 10; Murdock Valve Co., 10; E. Choze & Sons (manufacturers of wagons and trucks), 10; Theut & Lutz, 11; W. R. Cole (manufacturer of electrical goods and novelties), 11; Wm. Lindemann (manufacturer of carriages, wagons and trucks), 11; Graham Twist Drill Co., 12; American Stove Co., 12; J. Michell's machine works, 13; Chas. Rohde, 13; Gray Bros., 13; Detroit Edge Tool Works (manufacturers of machine knives), 14; The Phoenix Wire Works (manufacturers of wire cloth and wire goods), 16; Michigan Lubricator Co., 16; Penberthy Injector Co. (manufacturers of injectors and ejectors and oil cups), 16; Kahl & Co. (manufacturers of iron castings), 17; American Injector Co., 17; Rumsey Manufacturing Co. (manufacturers of vehicles), 17; F. Huettelman & Co., 18; E. T. Barnum (manufacturer of wire and iron work), 18; Michigan Elevator & Engine Co. (manufacturers of elevators and other machinery), 21; Byram & Co. (manufacturers of foundry cupola furnaces, structural and general iron work), 21; Art Stove Co., 22; American Harrow Co., 22; Hugh Johnson (manufacturer of carriages), 23; Fulton Iron and Engine Works, 24; Huyett & Smith Manufacturing Co., 26; American Brass and Metal Works (manufacturers of brass and metal office fittings, furniture fittings and special metal work), 27; Andrew Harvey & Sons (manufacturers of steam and water goods), 28; James Flower & Bro. (manufacturers of water gates and fire hydrants), 29; Thomas McGregor (manufacturer of boilers, tanks, smokepipes and heavy sheet iron work), 29; J. B. Wilson & Co. (manufacturers of engines and general iron work), 29; Detroit heating and Lighting Co., 33; Sievers & Erdman (manufacturers of vehicles), 34; Galvin Valve and Hydrant Co. (manufacturers of water gates, valves and hydrants), 34; Roe Stephens Manufacturing Co. (manufacturers of brass and iron straightway, globe, angle, radiator and pop safety valves, injectors and ejectors), 41; Cope Brothers (manufacturers of stove patterns, plumbers' cabinet work and lawn hose trucks), 41; Murphy Iron Works (manufacturers of Murphy's patent smokeless furnaces), 46; The Ireland & Mathews Manufacturing Co., 47; J. E. Bolles & Co. (manufacturers of wrought iron fencing and fronts and wire work), 52; Eagle Iron Works (manufacturers of boilers, engines, hoisting machinery, etc.), 56; Allen Foundry Co. (manufacturers of gray iron castings), 56; Buhl Stamping Co. (manufacturers of tubular lanterns, bird cages, etc.), 56; Michigan Wire and Iron Works, 59; C. R. & J. C. Wilson Carriage Co. (manufacturers of carriage and buggy bodies), 59; John Brennan & Co. (manufacturers of boilers), 65; Detroit Machine Screw Works (manufacturers of milled screws and nuts), 84; Michigan Malleable Iron Co., 93; Frontier Brass and Iron Works (manufacturers of marine engines, hoop dressing machinery and hydrants), 96; Detroit Sheet Metal and Brass Works (manufacturers of brass, copper and sheet metal work for banks, offices, steamboats and locomotives), 96; Galvin Brass and Iron Works (manufacturers of valves, fire hydrants, lawn fountains, etc.), 97; Detroit Radiator Co. (manufacturers of steam and water radiators), 97; Samuel F. Hodge & Co. (manufacturers of marine engines), 109; Detroit Electrical Works (manufacturers of railroad motors, dynamos and electrical sundries), 115; Griffin Car Wheel Co. (manufacturers of car wheels and castings), 118; Michigan Radiator & Iron Manufacturing Co. (manufacturers of radiators), 137; Michigan Bolt and Nut Works (manufacturers of bolts, nuts and bridge rods), 165; Russell Wheel and Foundry Co. (manufacturers of cars, car wheels and structural iron work), 169; The Henry C. Hart Manufacturing Co. (manufacturers of special hardware and brass furniture), 275; Detroit Stove Works (manufacturers of cook-

ing and heating stoves and ranges), 296; Michigan Stove Co. (manufacturers of stoves and ranges), 648.

Nationality: Americans, 1,693; Germans, 1,158; Canadians, 399; Englishmen, 153; Irishmen, 182; Scotchmen, 73; Polanders, 141; Frenchmen, 22; Swiss, 20; Hollanders, 20; Belgians, 19; Austrians, 12; Russians, 6; Danes, 8; Italians, 4; West Indian, 1; Norwegians, 8; Australians, 2; Bohemians, 2; Swedes, 5; Alaskan, 1; Albanian, 1. 43-per cent are Americans and 57-per cent foreigners. Of the foreigners 52-per cent are Germans; 18-per cent Canadians; 8-per cent Irishmen; 7-per cent Englishmen; 6-per cent Polanders; 3-per cent Scotchmen, and all other nationalities less than 1 per cent. Parentage of those born in the United States: American, 500; German, 568; Irish, 313; English, 74; Canadian, 64; French, 45; Scotch, 40; Polish, 38; Swiss, 13; Austrian, 11; Belgian, 7; Holland, 6; Russian, Hungarian, Swedish and Italian 1 each. 30-per cent have American and 70-per cent foreign parents. 1,893 are married, 1,971 single, and 56 widowers. 48-per cent are married, 50-per cent single and 2-per cent widowers. There are employed 99 boys 15 years of age; 36, 14 years and 11, 13 years of age. 1,656 support self only; 216 support others than self by boarding; 2,048 support families, as follows: Americans, 640; Germans, 757; Canadians, 203; Englishmen, 107; Irishmen, 121; Scotchmen, 43; Polanders, 97; Frenchmen, 18; Swiss, 9; Hollanders, 15; Belgians, 14; Austrians, 5; Russians, 3; Danes, 5; Italians, 2; Norwegians, 4; Australian, 1; Bohemians, 2; Swedes, 2. In 2,048 families there are 4,739 children, of whom 4,273 are supported. 339 married men have no children; 130 or 38-per cent are Americans; 103 Germans; 36 Canadians; 18 Englishmen; 17 Polanders; 15 Irishmen; 6 Scotchmen; 6 Frenchmen; 3 Swiss; 2 Russians; 2 Belgians, and 1 Norwegian. Of the children supported 1,754 are under 5 years of age; 2,418 are 5 years and under 20, and 101 are over 20. 1,417 attend school, which is 59 per cent of school age. 837 or 59-per cent attend the public schools; 568 parochial (500 Catholic and 68 Lutheran) and high school twelve. Number of persons supported in families, 6,665; by boarding, 352. 529 employes support 839 persons besides wife and children. Total number of weeks worked during the year, 177,997; average, 45.4+. 2,209 men or 58-per cent lost 22,804 weeks or 438 years and 28 weeks. Cause of lost time: No work, 1,540; vacation, 23; sickness, 122; sickness and no work, 54; not answered, 40; accident, 28; shut down, 334; laid off, 29; sickness and shut down, 20; sickness and laid off, 2; accident and no work, 11; accident and shut down, 3; on strike, 2; vacation and no work, 1. Total annual earnings, \$1,801,291.45; average, \$459.51. Total income from other sources, \$86,959, as follows: Family earnings, \$41,474; boarding, \$7,054; heirship, \$3,412; pensions, \$672; interest, \$4,685; rent, \$23,562; other sources, \$6,100. Total annual earnings of Americans, \$769,500.62, average, \$457.22; Germans, \$495,774.27, average, \$428.13; Canadians, \$194,994.05, average, \$488.70; Irishmen, \$93,036.18, average, \$527.67; Englishmen, \$87,659.98, average, \$572.94; Polanders, \$51,217.35, average, \$363.24; Scotchmen, \$43,762.60, average, \$509.49; Frenchmen, \$13,420.30, average, \$610.01; Swiss, \$8,799.50, average, \$439.97; Hollanders, \$9,164, average, \$458.20; Belgians, \$7,968.80, average, \$420.46; Austrians, \$5,482.50, average, \$456.87; Danes, \$3,738, average, \$467.25; Norwegians, \$3,241.50, average, \$405.18; Russians, \$1,906.50, average, \$332.75; Swedes, \$3,510, average, \$702; Italians, \$1,491.30, average, \$372.82; Australians, \$1,638, average, \$819; Bohemians, \$936, average, \$468; Alaskan, \$624, average, \$624; Albanian, \$121, average, \$121; West Indian, \$195, average, \$195. Average weekly wages of married men, \$11.92; single men, \$8.05; all employes, \$9.97. Wages paid per week: Ten employes, \$2 each; one, \$2.25; one, \$2.32; three, \$2.40; twenty-five, \$2.50; one, \$2.60; four, \$2.75; one, \$2.87; one hundred and eighty-four, \$3; four, \$3.25; fourteen, \$3.30; one, \$3.48; sixty-three, \$3.50; thirty-eight, \$3.60; three, \$3.75; four, \$3.90; one, \$3.95; forty-nine, \$4; nine, \$4.20; one, \$4.40; one hundred and five, \$4.50; one, \$4.60; thirteen, \$4.80; fifty-three, \$5; six, \$5.10; one, \$5.20; five, \$5.25; six, \$5.40; seven, \$5.50; one, \$5.60; one, \$5.75; one hundred and eighty, \$6; two, \$6.25; eleven, \$6.50; ten, \$6.60; three, 6.75; seven, \$6.90; fifty-four, \$7; one, \$7.20; four, \$7.25; one, \$7.31; four hundred and sixty-five, \$7.50; two, \$7.75; eight, \$7.80; one, \$7.83; two, \$7.90; one hundred and three, \$8; thirty-five, \$8.10; thirty-nine, \$8.25; one, \$8.30; thirty-four, \$8.40; thirteen, \$8.50; one, \$8.60; two, \$8.75; one, \$8.76; one, \$8.80; four hundred and twelve, \$9; three, \$9.25; nineteen, \$9.50; seven, \$9.60; one, \$9.62; two, \$9.65; one, \$9.70; nine, \$9.75; one, \$9.80; seven, \$9.90; one hundred and forty, \$10; one, \$10.10; one, \$10.20; one, \$10.25; two hundred and twelve, \$10.50; one, \$10.70; one, \$10.75; one, \$10.80; thirty-one, \$11; two, \$11.10; one, \$11.20; three, \$11.25; one, \$11.40; one, \$11.43; four, \$11.50; one, \$11.54; one, \$11.60; four hundred and fifty-four, \$12; one, \$12.30; five, \$12.50; one, \$12.57; two, \$12.60; two, \$12.75; thirty-three, \$13; two, \$13.20; two, \$13.25; two hundred and four, \$13.50; one, \$13.75; thirty-one, \$14; five, \$14.25; seven, \$14.40; twelve, \$14.50; one, \$14.48; two, \$14.60; three hundred and ninety-eight, \$15.00; six, \$15.48; five, \$15.50; eight, \$15.58; three, \$15.60; two, \$15.75; one, \$15.90; nineteen, \$16; forty-one, \$16.50; three, \$17; one, \$17.25; ninety-eight, \$18; one, \$18.25; one, \$18.82; five, \$19; one, \$19.20; one, \$19.25; seven, \$19.50; one, \$19.80; one, \$19.90; twenty, \$20; one, \$20.25; twenty-two, \$21; five, \$22; six, \$22.50; one,

\$23; one, \$23.50; fourteen, \$24; one, \$24.50; one, \$24.75; eight, \$25; one, \$26; one, \$27; one, \$28; two, \$29; three, \$30; one, \$38.46; one, \$40.

Total family expenses, \$1,068,716; per capita, \$122.66; Americans, \$359,227; per capita, \$150.24; Germans, \$353,195; per capita, \$103.03; Canadians, \$111,917; per capita, \$130.29; Englishmen, \$63,924; per capita, \$141.42; Irishmen, \$71,685; per capita, \$118.49; Scotchmen, \$29,033; per capita, \$151.21; Poles, \$37,872; per capita, \$87.87; Frenchmen, \$11,226; per capita, \$132.07; Swiss, \$5,155; per capita, \$177.76; Hollanders, \$7,168; per capita, \$110.28; Belgians, \$6,162; per capita, \$77.81; Austrians, \$2,654; per capita, \$120.64; Russians, 1,308; per capita, \$130.80; Danes, \$2,336; per capita, \$89.85; Italian, \$772; per capita, \$64.33; Norwegians, \$1,847; per capita, \$108.65; Australian, \$760; per capita, \$253.33; Bohemians, \$825; per capita, \$117.85; Swedes, \$1,650; per capita, \$103.12.

Number owning homes, 747: Americans, 155; Germans, 375; Canadians, 46; Englishmen, 32; Irishmen, 52; Scotchmen, 21; Poles, 39; Frenchmen, 6; Swiss, 3; Hollanders, 3; Belgians, 7; Austrians, 2; Danes, 2; Russian, Italian, Swede and Norwegian, 1 each. 720 married men, 20 single men and 7 widowers own homes. 38+per cent of married men own homes. 21-per cent of home owners are Americans and 79+per cent foreigners. Total value of homes, \$1,174,620; average, \$1,572.45: Americans, 296,750; average, \$1,914.51; Germans, \$483,785; average, \$1,200.09; Canadians, \$88,300; average, \$1,919.56; Englishmen, \$56,200; average, \$1,756.25; Irishmen, \$109,400; average, \$2,103.84; Scotchmen, \$56,400; average, \$2,685.71; Poles, \$37,350; average, \$957.69; Frenchmen, \$12,000; average, \$2,000; Swiss, \$5,000; average, \$1,666.66; Hollanders, \$4,800; average, \$1,600; Belgians, \$13,600; average, \$1,942.85; Austrians, \$2,200; average, \$1,100; Russians, \$635; average, \$635; Danes, \$2,900; average, \$1,450; Italians, \$1,200; average, \$1,200; Norwegian, \$1,600; average, \$1,600; Swede, \$2,500; average, \$2,500. The homes of 476 employes are mortgaged, which is 63+per cent. Value of mortgaged homes, \$665,890; mortgaged for \$260,915; which is 39+per cent of valuation. The homes of 89 Americans are mortgaged for \$57,670; 262 Germans for \$131,445; 35 Canadians for \$26,300; 12 Englishmen for \$8,345; 20 Irishmen for \$10,760; 12 Scotchmen for \$5,930; 29 Poles for \$11,490; 3 Frenchmen for \$1,700; 3 Hollanders for \$1,100; 3 Belgians for \$1,900; 2 Austrians for \$1,000; 2 Danes for \$690; 1 Italian for \$900; 1 Norwegian for \$300; 1 Russian for \$585; 1 Swiss for \$800. During the year 340 employes made payments and improvements upon homes amounting to \$53,417, and 751 men saved \$111,101 in money. Total number of employes who saved 1,031, which is 27+per cent. Total savings, including payments and improvements upon homes, \$164,518, which is 9+per cent of total earnings. Total present worth of 3,234 employes (686 not reporting), \$2,318,092; average, \$716.78; Americans, 1,275; total, \$852,272; average, \$668.45; Germans, 992; total, \$654,975; average, \$660.25; Canadians, 344; total, \$229,765; average, \$667.92; Englishmen, 145; total, \$113,045; average, \$779.62; Irishmen, 168; total, \$218,935; average, \$1,303.18; Scotchmen, 67; total, \$101,775; average, \$1,519.03; Poles, 126; total, \$51,380; average, \$407.77; Frenchmen, 21; total, \$17,580; average, \$833.33; Swiss, 18; total, \$10,375; average, \$576.38; Hollanders, 18; total, \$8,640; average, \$480; Belgians, 17; total, \$17,815; average, \$1,047.94; Austrians, 11; total, \$8,610; average, \$782.72; Russians, 5; total, \$1,125; average, \$225; Danes, 8; total, \$5,900; average, \$737.50; Italians, 3; total, \$750; average, \$250; Norwegians, 6; total, \$3,700; average, \$616.66; Australians, 2; total, 1,100; average, \$550; Bohemians, 2; total, \$1,100; average, \$550; Swedes, 5; total, \$7,250; average, \$1,450; Alaskan, 1; total, \$12,000.

Fourteen employes are worth \$5,000 each; one, \$5,300; one, \$5,500; seven, \$6,000; one, \$6,250; two, 6,500; three, \$7,000; one, \$7,500; five, \$8,000; one, \$8,500; three, \$9,000; two, \$10,000; one, \$11,500; three, \$12,000; one, \$13,000; one, \$15,000; one, \$17,000; and one, \$18,000. 246 Germans had \$33,572 upon arrival in this country; 108 Canadians, \$23,081; 65 Englishmen, \$27,095; 48 Irishmen, \$4,917; 31 Scotchmen, \$6,242; 32 Poles, \$4,323; 9 Frenchmen, \$2,210; 5 Swiss, \$350; 3 Hollanders, \$188; 5 Belgians, \$1,255; 3 Russians, \$210; 1 Dane, \$200; 2 Italians, \$35; 1 Norwegian, \$200; 1 Bohemian, \$200; 1 Australian, \$500. Total present worth of foreigners, \$1,465,820; number renting homes, 1,164; Americans, 428; Germans, 338; Canadians, 144; Englishmen, 71; Irishmen, 61; Scotchmen, 21; Poles, 53; Frenchmen, 10; Swiss, 5; Hollanders, 11; Belgians, 6; Austrians, 3; Russians, 2; Danes, 3; Italians, 1; Norwegians, 3; Australian, 1; Bohemians, 2; Swede, 1. 20 single men and 17 widowers rent and 19 have rent free. 58+per cent of married men and 80-per cent of total employes rent. Total monthly rent, \$9,031.25; average, \$7.75. Total annual rent, \$108,375; average, \$93.11. Per cent of rent to earnings, 17+per cent of rent to expenses, 17+. Total monthly rent of Americans, \$3,770.50; average, \$8.81; Germans, \$1,913.50; average, \$5.66; Canadian, \$1,369.50; average, \$9.51; Englishmen, \$653.50; average, \$9.20; Irishmen, \$537.50; average, \$8.81; Scotchmen, \$206.50; average, \$9.83; Poles, \$207.25; average, \$3.91; Frenchmen, \$82; average, \$8.20; Swiss, \$44.50; average, \$8.90; Hollanders, \$77; average, \$7; Belgians, \$39.50; average, \$6.58; Austrians, \$26; average, \$8.67; Russians, \$7; average, \$3.50; Danes, \$23; average, \$7.67; Italians, \$6; average, \$6; Norwegians, 21; average, \$7; Australians, \$10; average, \$10; Bohemians, \$25; average, \$12.50; Swedes, \$12; average, \$12.

Number of employes boarding, 1,189, which is 30+per cent of total. 690 live at home and give wages to parents; 73 live at home and support family; 27 live at home and pay no stated amount for board; 10 have board free. Total weekly board, \$4,442.40, average, \$3.74; Americans, 648; total, \$2,480.55; average, \$3.83; Germans, 218; total, \$748.85; average, \$3.44; Canadians, 141; total, \$524.40; average, \$3.72; Englishmen, 36; total, \$150.50; average, \$4.18; Irishmen, 54; total, \$210.50; average, \$3.90; Scotchmen, 26; total, \$102.10; average, \$3.93; Polanders, 27; total, \$83.75; average, \$3.10; Swiss, 10; total, \$36.50; average, \$3.65; Frenchmen, 4; total, \$14.50; average, \$3.62; Hollanders, 2; total, \$9.50; average, \$4.75; Belgians, 3; total, \$11; average, \$3.67; Austrians, 4; total, \$15; average, \$3.75; Russians, 3; total, \$9.75; average, \$3.25; Danes, 3; total, \$9.50; average, \$3.17; Italians, 2; total, \$6; average, \$3; West Indian, 1; total, \$3; average, \$3; Norwegians, 2; total, \$8; average, \$4; Australian, 1; total, \$4; average, \$4; Swedes, 3; total, \$11; average, \$3.67; Alaskan, 1; total, \$4; average, \$4. 225 employes keep an itemized account of their expenses, which is 6-per cent of total. 1,349 own sewing machines, which is 66-per cent of those supporting families. 663 own musical instruments, which is 17-per cent. Number of musical instruments: Pianos, 140; organs, 98; violins, 124; guitars, 147; banjos, 37; horns, 32; accordians, 59; auto-harps, 13; flutes, 15; clarionets, 7; cornets, 5; bass viols, 4; drums, 2; fifes, 2; trombones, 1; melodeons, 3; violin cello, 2; harps, 2; zithers, 7; piccolos, 3; mandolina, 2; bugle, 1; concertinas, 2; Xylophone, 1; music box, 1. Number of employes who take newspapers and magazines, 2,638: Americans, 1,263; Germans, 598; Canadians, 316; Englishmen, 132; Irishmen, 136; Scotchmen, 65; Polanders, 44; Frenchmen, 20; Swiss, 13; Hollanders, 13; Belgians, 9; Austrians, 7; Russians, 2; Danes, 3; Italian, 1; Norwegians, 7; Australians, 2; Swedes, 5; Bohemian, 1; Alaskan, 1. 67+per cent take newspapers and magazines, of which 48-per cent are Americans. Number taking dailies, 2,283; story, 175; sporting, 24; religious, 107; labor, 117; scientific, 120; magazines, 74; local and other weekly newspapers, 1,163.

Two thousand eight hundred and ninety-five work at hand work, 910 at machine work, and 115 at both. 441 men or 11+per cent have been injured since engaged as employes. 616 reported that their labor organization had been of financial benefit to them, and 79 no financial benefit. Other than financially, 13 reported that their labor organization had been of benefit socially and educationally; 57 socially; 41 educationally; 18, "made more harmony between us and our employers;" 21, got the emery wheel blowers and did away with the "buck system;" 24, gave us a better system of discounts and prices; 144 said yes but did not state what the benefit had been; 346 said that their organization had been of no other benefit. 856 carry life insurance amounting to \$1,276,386; average, \$1,491.10; Americans, 307; total, \$526,320; Germans, 270; total, \$236,061; Canadians, 83; total, \$143,537; Englishmen, 47; total, \$83,383; Irishmen, 59; total, \$119,945; Scotchmen, 32; total, \$53,080; Polanders, 22; total, \$10,000; Frenchmen, 9; total, \$12,900; Swiss, 7; total, \$8,725; Hollanders, 3; total, \$2,310; Belgians, 4; total, \$7,725; Austrians, 2; total, \$2,250; Italian, 1; total, \$50; Norwegians, 2; total, \$4,000; Bohemians, 2; total, \$2,600; Swedes, 4; total, \$11,000; Alaskan, 1; total, \$500; Australian, 1; total, \$2,000; 22-per cent of employes are insured, 1,117 belong to benefit societies: Americans, 364; total, \$2,672; average, \$7.34; Germans, 414; total, \$2,544; average, \$6.14; Canadians, 110; total, \$783; average, \$7.12; Englishmen, 56; total, \$351; average, \$6.27; Irishmen, 54; total, \$301.50; average, \$5.58; Scotchmen, 28; total, \$181; average, \$6.46; Polanders, 48; total, \$223; average, \$4.65; Frenchmen, 7; total, \$48; average, \$6.86; Swiss, 9; total, \$54; average, \$6; Hollanders, 5; total, \$23; average, \$4.60; Belgian, 1; total, \$15; average, \$15; Austrians, 5; total, \$28; average, \$5.60; Russians, 3; total, \$15; average, \$5; Danes, 2; total, \$14; average, \$7; Italians, 2; total, \$10; average, \$5; Norwegians, 2; total, \$10; average, \$5; Bohemians, 2; total, \$20; average, \$10; Swedes, 5; total, \$25; average, \$5. Total weekly benefit, \$7,317.50; average, \$6.55. 29-per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
BATTLE CREEK.

TABLE No. 2.—Showing the Individual Reports

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
ADVANCE THRESHER CO.												
Fireman	36	Mexico	Mexico	m	2	2			1	52		
Wood worker	33	U. S.	U. S.	m	1	1	2		3	50	2	accident and laid off
	28	"	"	m	1	1			2	47	5	laid off
Engineer	54	"	"	m	2	1	1		3	52		
Wood worker	23	"	"	m	1	1			2	46	6	laid off
"	42	"	"	m	1	1	1		2	46	6	"
Teamster and team	36	"	"	m	3	3			4	49	3	vacation
Wood worker	42	"	"	m	5	5	3		8	49	3	sick
"	40	"	"	m	1	1			2	43	9	sick and shop closed
"	52	"	"	m	1	1			2	48	9	sick
"	30	"	"	m	1	1	1		2	49	3	laid off
"	39	"	"	m	2	2	2		4	52		
"	31	"	"	m	1	1			2	51	1	holidays
"	30	Canada	Ireland	m	1	1			2	47	5	sick and laid off
"	34	U. S.	U. S.	m				2	3	51	4	sick
"	36	"	"	m	4	4	3		7	49	3	sick and vacation
"	42	"	England	m	1	1	1		2	48	4	sick
"	35	"	U. S.	m	2	2	2		4	46	6	laid off
"	56	"	"	m	1	1			2	52		
Iron	35	"	"	m	1	1	2		3	52		
Wood	34	"	"	m	3	3	2		4	49	3	laid off
"	59	"	"	m	5	5	3		8	52		
"	26	"	"	m					1	51	1	vacation
"	47	"	"	m	1	1			2	52		
"	59	"	"	m	1	1			2	46	6	shut down
"	47	"	"	m	2	2	2		4	46	6	laid off
"	39	"	"	m	2	2	1		3	52		
"	36	"	"	m	1	1	1		2	35	17	out of work
"	23	"	"	m	1	1			2	46	6	laid off
"	26	"	"	m	1	1		1	3	45	7	sick and laid off
"	28	"	"	m					1	35	17	accident and no work
"	59	"	"	m					1	48	4	vacation
"	26	"	"	m	1	1			2	48	4	sick
"	39	"	"	m	1	1	1		3	37	15	laid off
"	63	"	"	m	2	1	1		3	50	2	sick and laid off
"	48	"	"	m	3	2	1		3	37	15	out of work
"	39	"	"	m				1	1	39	13	laid off
"	36	"	"	m					1	48	4	sick
"	42	"	"	m	1	1	1	1	3	43	9	no work—vacation
"	53	England	England	m				1	2	44	8	shut down
Painter	42	U. S.	U. S.	m	4	2	2		3	48	4	laid off
"	23	"	"	m	1	1			2	43	9	"
"	25	"	"	m	2	2			3	52		
"	34	"	"	m					1	46	6	laid off
"	28	"	Ireland	m	1	1			2	43	9	shut down
"	63	"	U. S.	m					1	42	10	sick and laid off
"	35	"	"	m	1	1			2	50	2	sick
"	32	"	"	m	3	3	3		4	43	9	sick and laid off
Wood worker	48	"	"	m	1	1			1	50	2	sick
"	46	"	"	m	1	1	1		2	50	2	"

of the Employes Canvassed in Battle Creek.

Income.				Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amt of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, amt.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$12 00	\$624 00		\$624 00	\$574				\$50	\$6 00		\$2000	1	\$3 00	28	\$1000
9 00	450 00		450 00	350	\$800	\$800		100			1000				500
9 00	423 00		423 00	378				50	6 00						400
15 00	780 00		780 00	780					13 00						2000
9 00	414 00		414 00	314	900	300	\$100				2000				1000
10 50	483 00		483 00	305	3000	750	52	125			2500				3000
14 40	705 60		705 60	355	1000	800	200	150							1200
8 50	416 50		416 50	318	900	500		100			2000				500
8 50	385 50		385 50	385					8 00		2000				
9 00	387 00	\$72	459 00	459					8 00						1000
8 00	392 00		392 00	332	900	600	60								500
9 00	468 00		468 00	388	1400	500	100								1500
12 00	612 00		612 00	512				100	7 00		2000				300
11 00	517 00		517 00	517					9 00		3000			13	500
10 00	510 00		510 00	435				75	7 00		2000	1	6 00		300
9 00	441 00		441 00	408	1000	125	35				1000				1800
9 00	432 00		432 00	318	1000	100	114				2000				2000
9 00	414 00		414 00	364	800	175	50								600
24 00	1248 00		1248 00	648	1500			800							2000
12 00	624 00		624 00	424	2000	225	300				2000				3000
9 00	441 00		441 00	424	400	100	16								375
9 00	468 00		468 00	418	700	300	50								600
13 00	765 00		765 00	765					6 00						300
11 00	572 00		572 00	397				175	9 50						800
10 50	468 00		468 00	388	3000			100							3500
10 50	483 00	150	633 00	583	1000	450	50				2000				800
15 00	750 00	500	1250 00	880	1500		100	300			2000				5000
10 00	350 00		350 00	350	1200	750					2000				900
9 00	414 00		414 00	364				50	7 00		3000				250
12 00	540 00		540 00	540					8 00			1	4 00		125
12 00	420 00		420 00	270	1400		150				2000				2000
12 00	576 00		576 00	478				100	6 00						1000
16 68	799 68		799 68						\$7 00						
8 50	314 50	150	464 50	464					7 00						1800
10 50	525 00		525 00	525	1500										1800
12 00	444 00		444 00	444					4 50						2000
13 50	528 50		528 50	528					9 00		2000				1000
10 50	504 00		504 00	454	500	200	50		8 00			1	7 00		500
10 50	451 50		451 50	411								1	3 00		500
10 50	462 00		462 00	346	1500	100	116				150			20	2000
12 00	576 00		576 00	576					7 00						150
10 50	451 50		451 50	251	800	450	200								450
12 00	624 00		624 00	499	1000	650	125								500
9 00	414 00		414 00	364				50	5 00						500
10 50	451 50		451 50	491					5 00						200
12 00	504 00		504 00	384				120	6 00						150
7 50	375 00	50	425 00					100	6 00						1000
9 00	387 00		387 00	487					6 00						300
11 00	550 00		550 00	431	1000	200	44	75			3000				2000
12 00	600 00		600 00	590	425	280	20				2000				600

TABLE No. 2.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Wood worker	28	U. S.	U. S.	m	1	1			1	39	13	laid off
Iron worker	31	"	"	m	3	3			4	50	2	"
Wood worker	38	"	"	m	3	3	1		4	43	9	"
Machinist	53	"	"	m	1	1			2	43	4	sick and laid off
"	35	"	"	m	1	1	1		2	52		"
"	25	Canada	Germany	m					1	39	13	out of work
"	36	Holland	Holland	m	2	2	2		3	48	4	laid off
"	19	U. S.	U. S.	m	1	1			2	39	13	"
"	31	"	"	m	1	1			2	52		"
Iron worker	65	"	"	m					1	39	13	sick and laid off
Laborer	44	"	Canada	m	2	2	2		3	26	26	out of work
Machinist	28	"	U. S.	m	2	2	1		3	52		"
Painter	38	"	"	m	3	3	1		4	44	8	laid off
"	34	"	"	m	5	5	5		6	43	9	"
"	29	"	"	m					1	46	6	"
Wood worker	40	"	Ireland	m					1	29	23	laid off and accident
Painter	80	"	U. S.	m					1	44	8	sick and laid off
Seive maker	46	"	"	m	1	1	1		2	48	4	"
"	22	"	Germany	m	1	1			2	50	2	sick and vacation
"	62	"	U. S.	m	1	1	1		2	48	4	sick and laid off
Wood worker	21	"	"	m	1	1			2	48	4	laid off
"	28	"	"	m					1	48	4	"
"	33	"	Russia	m					1	35	17	sick and laid off
"	34	"	U. S.	m	3	3	2		4	46	6	sick and accident
"	35	"	Germany	m	3	2		1	4	47	5	laid off
Shipping clerk	40	"	U. S.	m	1	1	1		2	53		"
Wood worker	40	Germany	Germany	m	5	5	3		6	52		"
"	29	Canada	Ireland	m	2	2			3	51	1	laid off
"	40	U. S.	U. S.	m	8	3	3		4	48	4	"
"	48	England	England	m					1	43	9	"
"	28	U. S.	U. S.	m					1	43	9	out of work
"	31	"	"	m	3	3			4	43	9	sick and laid off
Painter	36	"	"	m	7	7	4		8	35	17	laid off
"	25	"	"	m					1	39	13	sick and no work
Teamster and team	49	"	"	m	1	1	1		2	52		"
Machinist	28	"	"	m					1	51	1	laid off
Engineer	35	"	"	m	1	1	1		2	52		"
"	48	"	Canada	m	3	3	2		4	52		"
Wood worker	26	Canada	"	m	1	1			2	52		"
"	28	U. S.	U. S.	m					1	43	9	laid off
Painter	45	"	"	m	2	2	2		3	43	9	"
Teamster	32	"	England	m	1	1			2	52		"
Painter	35	"	U. S.	m	1	1			1	52		"
"	47	"	"	m	1	1	1	1	3	47	5	laid off
"	45	"	"	m	2	2	2		3	49	3	"
"	32	"	"	m	2	2	1		3	49	3	"
"	31	"	"	m					1	48	4	"
"	42	"	"	m	2	2	2		3	47	5	"
Iron worker	50	"	"	m				1	2	46	6	laid off and sick
Laborer	53	Ireland	Ireland	m	2	1	1		2	51	1	sick
"	22	U. S.	England	m	1	1			2	35	17	sick and no work
"	28	Germany	Germany	m	3	2			3	46	6	laid off
"	37	U. S.	"	m	4	4	2		5	43	9	"
Teamster and team	33	"	U. S.	m	1	1		1	3	46	6	"
Teamster	44	"	"	m					1	47	5	out of work

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cos. per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 00	\$390 00		\$390 00	\$390					\$5 00		\$1000					\$100
10 50	525 00		525 00	525	\$1400		\$75				2000					1800
9 00	374 00		387 00	351	900	\$125	36				2000					800
10 50	504 00		504 00	244	2000		10				2000					2500
13 50	702 00		702 00	602	1800	350	100				3000					1450
9 00	351 00		351 00	351						6 50				23		600
9 00	432 00		432 00	27	500	150	145				2000			32		150
9 00	351 00		351 00	351						6 50						1000
9 00	468 00		468 00	668	1000	450					2000					6000
10 50	408 50	\$390	799 50	449	4000		50	300								
9 00	234 00		234 00	234					9 00							200
11 50	598 00		598 00	598					8 00		1000					500
8 00	352 00		352 00	352					4 00							200
10 50	451 50		451 50	451					10 00							600
9 00	414 00		414 00	389				75	6 00							600
12 00	348 00	40	388 00	288	700	200	100									800
8 00	352 00		352 00	277				75	5 00							100
8 00	324 00	24	408 00	408					9 00		2000					1200
9 00	450 00		450 00	415				35	12 00							600
9 00	482 00		482 00	482					6 00							500
10 50	504 00		504 00	372	600		132				2000					750
12 50	576 00		576 00	426				150	6 00							250
10 50	367 50		367 00	317				50	7 00							300
11 00	506 00		506 00	506					6 00							200
12 50	684 50		684 50	434	1000	800	200				700	1	\$3 00			1500
9 00	468 00		468 00	468	1600	250										2000
13 00	624 00	150	774 00	624	2000			150			2600	1	4 00	21		2500
13 50	688 50		688 50	688					7 25		2000			9		1400
12 50	600 00		600 00	600	1400	200					2000					800
12 00	516 00		516 00	373				140	4 50		2000			47		
9 00	387 00		387 00	387					6 00		2000					300
13 50	580 50		580 50	490				100	9 00		2000					350
10 50	367 50		367 50	367					7 00							500
9 00	351 00		351 00	276				75	6 00		2000					800
15 00	780 00		780 00	780					11 00		2000					1000
13 00	663 00		663 00	513	1300	900		150			2000					800
13 50	702 00		702 00	502	1500			200			2000					2500
15 23	799 78		799 78	499	3000			300			2000					2500
13 00	624 00	50	674 00	364	1500	750	110				2000			6		1200
10 50	451 50		451 50	391				60	4 25		2000					150
9 00	387 00		387 00	387	1400	200	20									1500
9 00	468 00		468 00	468					6 00							200
9 00	468 00		468 00	468			200		8 00							8000
12 00	564 00		564 00	364	900			75			2500					400
10 00	480 00		480 00	390	1000		50				1000					2000
10 00	490 00		490 00	480	1000		10				1000					1400
13 50	648 00		648 00	541	1800	100	107									3500
10 00	470 00	300	770 00	613	700	250	125				1000					600
10 50	483 00		483 00	358				125	5 00							850
9 00	459 00		459 00	284	2000		175					1	5 00	41		2500
7 50	263 50	175	437 50	262				175	7 00							800
7 50	345 00		345 00	345					6 00					18		200
7 50	322 50		322 50	322					5 00							800
15 00	690 00		690 00	440				250	6 00							1000
9 00	423 00		423 00	323	800	300	100									1000

TABLE No. 2.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker	52	U. S.	U. S.	m	2	2	2		3	52		
	45	"	Germany	m	2	2	2		4	46	6	laid off
Machinist	38	"	U. S.	m	2	2	2		3	51	1	"
Painter	38	"	Germany	m	1	1			2	46	6	"
Wood worker	36	"	U. S.	m	2	2			3	46	6	"
	45	"	"	m					1	50	2	"
Machinist	28	"	Germany	m	3	3	1		4	45	9	sick and laid off
Laborer	45	Germany	U. S.	m	5	4	2		5	49	3	laid off
Machinist	26	U. S.	U. S.	m				1	2	48	4	"
Laborer	42	"	"	m	1	1			2	39	13	laid off & out of w'k
Iron worker	31	"	"	m	2	2		1	4	52		"
Blacksmith	31	"	"	m	1	1			2	52		"
	30	"	England	m	2	2	2		3	49	3	vacation
"	43	"	"	m	3	2			3	51	1	laid off
"	50	Ireland	Ireland	m	1	1	1		2	48	4	"
"	29	U. S.	U. S.	m					1	51	1	"
"	61	Canada	"	m	2	1			2	50	2	laid off and vacation
"	34	U. S.	"	m	4	4	1		5	52		"
"	28	"	"	m	1	1	1		2	50	2	holidays and laid off
"	37	"	Ireland	m	1	1		1	3	51	1	laid off
Laborer	24	"	U. S.	m					1	51	1	"
Machinist	21	"	England	m				1	2	51	1	"
"	45	"	U. S.	m	8	8	6		9	51	1	"
"	30	"	"	m				1	2	51	1	"
"	32	"	"	m	1	1	1		2	50	2	laid off and vacation
Pattern maker	45	"	"	m	3	3	3		4	52		"
"	63	"	"	m	2	1	1	1	3	52		"
"	27	"	"	m					1	51	1	vacation
Machinist	31	"	England	m	1	1			2	51	1	"
Blacksmith	61	"	U. S.	m	1	1			2	52		"
Machinist	59	"	"	m	2	2	1		3	9	43	sick
"	44	"	England	m					1	51	1	vacation
Painter	32	"	U. S.	m	1	1			2	22	30	sick
"	43	"	"	m	5	5	3		6	43	9	out of work
"	36	"	"	m	2	2	1		3	48	4	laid off
"	43	"	"	m					1	32	20	sick
Machinist	23	"	"	m					1	50	2	laid off
"	35	"	"	m	3	3	1		4	51	1	vacation
Iron worker	30	"	"	m	2	2	1		3	52		"
"	36	"	"	m	3	3	2		4	14	38	out of work
"	45	"	"	m					1	52		"
"	31	"	Ireland	m	1	1			2	52		"
"	41	"	U. S.	m	1	1	1		2	52		"
"	33	"	"	m	3	3	1		4	50	2	laid off
"	24	"	"	m					1	50	2	accident
Machinist	44	"	"	m	2	2	1		3	52		"
"	30	"	"	m	1	1			2	51	1	holidays
"	45	"	"	m	1	1	1		2	52		"
"	69	"	"	m					1	39	18	sick
"	38	"	"	m	2	2	1		3	44	8	accident and laid off
"	33	"	"	m	3	3			4	50	2	sick
"	32	"	"	m	1	1		1	3	49	3	sick and vacation
"	40	"	"	m	2	2	2		3	51	1	laid off
"	32	"	"	m	2	2			3	50	2	"

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$19 23	\$1000 00	-----	\$1000 00	\$675	\$2000	-----	-----	\$325	-----	-----	\$5000	-----	-----	-----	-----	\$3000
15 00	690 00	-----	690 00	450	1000	-----	-----	450	-----	-----	-----	-----	-----	-----	-----	1500
15 00	765 00	-----	765 00	500	1500	-----	-----	265	-----	-----	-----	-----	-----	-----	-----	2500
12 00	552 00	-----	552 00	352	800	-----	-----	200	-----	-----	2000	-----	-----	-----	-----	1200
9 00	414 00	-----	414 00	364	-----	-----	-----	50	\$6 00	-----	-----	-----	-----	-----	-----	500
10 50	483 00	-----	483 00	383	-----	-----	-----	100	7 00	-----	-----	-----	-----	-----	-----	600
12 00	600 00	-----	600 00	450	-----	-----	-----	150	8 00	-----	2000	-----	-----	-----	-----	800
9 00	347 00	-----	347 00	387	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	500
7 50	367 50	\$75	442 50	328	800	200	114	-----	-----	-----	-----	-----	-----	15	-----	800
12 00	576 00	-----	576 00	576	-----	-----	-----	-----	9 00	-----	-----	-----	-----	-----	-----	275
9 00	351 00	-----	351 00	341	1000	-----	10	-----	-----	-----	-----	1	\$6 00	-----	-----	1200
12 00	624 00	-----	624 00	574	-----	-----	-----	50	6 00	-----	2000	-----	-----	-----	-----	500
9 00	468 00	-----	468 00	393	1000	-----	75	-----	-----	-----	2000	-----	-----	-----	-----	1200
9 00	441 00	-----	441 00	391	600	500	50	-----	-----	-----	2000	-----	-----	-----	-----	350
10 00	510 00	48	558 00	423	1200	-----	-----	125	-----	-----	-----	-----	-----	-----	-----	2000
7 50	360 00	120	480 00	480	1000	-----	-----	-----	-----	-----	-----	-----	-----	-----	35	2500
11 40	561 40	100	661 40	481	1000	650	200	-----	-----	-----	-----	-----	-----	-----	-----	1000
11 00	550 00	-----	550 00	600	1000	-----	-----	-----	-----	-----	1000	-----	-----	57	-----	2500
12 00	624 00	-----	624 00	374	1200	200	250	-----	-----	-----	2000	-----	-----	-----	-----	2000
10 50	525 00	250	775 00	675	-----	-----	-----	100	6 00	-----	-----	-----	-----	-----	-----	1000
12 00	612 00	-----	612 00	512	1000	-----	-----	100	-----	-----	2000	-----	-----	-----	-----	1500
9 00	459 00	-----	459 00	309	-----	-----	-----	150	6 00	-----	-----	-----	-----	-----	-----	400
9 00	489 00	-----	489 00	489	-----	-----	-----	-----	8 00	-----	2000	-----	-----	-----	-----	200
13 00	663 00	-----	663 00	663	1000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1400
13 50	688 50	-----	688 50	688	-----	-----	-----	-----	7 00	-----	-----	-----	-----	-----	-----	-----
10 50	525 00	-----	525 00	400	1000	-----	125	-----	-----	-----	-----	-----	-----	-----	-----	1200
16 50	858 00	-----	858 00	658	1200	-----	-----	200	-----	-----	-----	-----	-----	-----	-----	2000
12 00	624 00	-----	624 00	374	-----	-----	-----	250	8 00	-----	-----	-----	-----	-----	-----	1300
12 00	612 00	-----	612 00	412	1200	-----	200	-----	-----	-----	2000	-----	-----	-----	-----	1600
13 50	688 50	35	723 50	360	1800	-----	-----	368	-----	-----	-----	-----	-----	-----	-----	3000
13 50	702 00	-----	702 00	552	1800	-----	150	-----	-----	-----	500	1	7 00	-----	-----	2000
8 00	72 00	-----	72 00	212	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	300
10 50	535 50	-----	535 50	535	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	200
13 50	297 00	-----	297 00	297	-----	-----	-----	-----	5 00	-----	-----	-----	-----	-----	-----	150
9 00	387 00	-----	387 00	487	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	200
12 00	576 00	-----	576 00	426	1400	200	50	100	-----	-----	2000	-----	-----	-----	-----	2000
9 00	288 00	-----	288 00	288	1000	-----	-----	-----	-----	-----	1000	-----	-----	-----	-----	1500
9 00	450 00	-----	450 00	420	2000	-----	30	-----	-----	-----	-----	-----	-----	-----	-----	8000
10 50	535 50	-----	535 50	385	-----	-----	-----	150	8 00	-----	-----	-----	-----	-----	-----	800
9 00	468 00	180	648 00	548	1800	-----	100	-----	-----	-----	2000	-----	-----	-----	-----	5000
10 50	147 00	-----	147 00	447	1000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2000
12 00	624 00	-----	624 00	574	1800	-----	50	-----	-----	-----	2000	-----	-----	-----	-----	3000
12 50	650 00	-----	650 00	650	-----	-----	-----	-----	10 00	-----	2000	-----	-----	-----	-----	1000
11 50	598 00	150	748 00	673	900	375	-----	75	-----	-----	2000	-----	-----	-----	-----	3500
12 00	600 00	-----	600 00	475	500	250	125	-----	-----	-----	-----	-----	-----	-----	-----	600
12 00	600 00	-----	600 00	600	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	-----	500
10 50	546 00	-----	546 00	546	-----	-----	-----	-----	9 50	-----	2000	-----	-----	-----	-----	1000
10 50	535 50	-----	535 50	360	1000	825	175	-----	-----	-----	1000	-----	-----	-----	-----	475
15 00	780 00	120	900 00	900	2000	-----	-----	-----	-----	-----	2000	-----	-----	-----	-----	3500
12 00	468 00	-----	468 00	468	2000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4000
9 00	396 00	-----	396 00	396	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	-----	8000
9 00	450 00	-----	450 00	450	-----	-----	-----	-----	6 25	-----	-----	-----	-----	-----	-----	500
10 50	514 50	-----	514 50	385	1000	460	128	-----	-----	-----	-----	-----	-----	-----	-----	700
12 00	612 00	-----	612 00	537	1000	400	75	-----	-----	-----	-----	-----	-----	-----	-----	800
13 50	675 00	-----	675 00	525	1800	500	150	-----	-----	-----	2000	-----	-----	-----	-----	2000

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	48	U. S.	U. S.	M	3	2	2		3	50	2	laid off
Wood worker	28	"	"	W	1	1			1	51	1	"
"	56	"	"	W	2	2			2	52		"
"	44	"	"	W	1	1	1		1	51	1	sick
"	45	"	"	W	1	1	1		1	50	2	"
"	37	"	"	W	2	2	2	1	3	46	6	"
Machinist	24	"	"	S						51	1	vacation
Wood worker	24	"	"	S				1	1	39	13	out of work
Painter	36	"	"	S				2	2	46	6	laid off
"	19	"	"	S				5	5	50	2	sick
Blacksmith	38	Ireland	Ireland	S				2	2	46	6	sick and laid off
Machinist	22	U. S.	U. S.	S				1	1	50	2	laid off
"	24	"	Germany	S				3	3	50	2	sickness
"	15	"	U. S.	S				1	1	51	1	sick
"	26	"	U. S.	S				1	1	39	13	out of work
Wood worker	14	"	"	S						47	5	laid off
"	16	"	"	S						44	8	school
"	18	"	Ireland	S						46	6	laid off
Painter	24	Canada	"	S						48	4	"
"	26	U. S.	U. S.	S						52		"
"	18	"	"	S						52		"
"	31	"	"	S						26		sick
Wood worker	20	"	"	S						39	13	laid off
Machinist	20	"	"	S						46	6	"
"	19	England	England	S						39	13	sick and laid off
"	18	U. S.	U. S.	S						45	7	laid off and vacation
"	20	"	Ireland	S						39	13	laid off
"	25	"	U. S.	S						52		"
"	22	"	"	S						51	1	vacation
Painter	18	"	"	S						49	3	sick
"	27	"	"	S						52		"
"	30	"	"	S						44	8	out of work
"	27	"	"	S						52		"
"	25	"	"	S						48	4	vacation
"	38	"	"	S						46	6	laid off
Wood worker	32	"	"	S						52		"
Engine tester	22	"	"	S						48	4	laid off
Wood worker	30	"	Germany	S						52		"
"	25	"	U. S.	S						50	2	laid off
"	24	Canada	Canada	S						39	13	"
Iron worker	23	U. S.	Ireland	S						48	4	"
Blacksmith	24	"	U. S.	S						39	13	laid off and vacation
Laborer	22	"	"	S						39	13	sick and laid off
Painter	22	"	"	S						39	13	laid off and no work
"	25	"	"	S						48	9	laid off
Wood worker	18	"	"	S						43	9	"
Machinist	20	"	"	S						39	13	laid off and no work
"	24	"	"	S						48	4	laid off
"	17	"	"	S						49	3	sick and vacation
Blacksmith	34	"	"	S				1	1	52		"
Iron worker	36	Ireland	Ireland	S						51	1	laid off
Blacksmith	22	U. S.	U. S.	S						48	4	"
"	17	"	"	S						50	2	laid off and vacation
Machinist	17	"	"	S						48	4	sick
"	19	"	"	S						51	1	laid off

TABLE No. 2—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amt of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
10 50	\$525 00		\$525 00	\$425				\$100	10 00		\$2000					\$300
10 50	538 50		538 50	410				125	8 00			1	\$3 00			1200
9 50	494 00		494 00	494				200	8 00							300
12 00	612 00		612 00							\$6 00	2000					
10 50	525 00		525 00							5 00						
15 00	690 00		690 00	619	\$1000	\$300	\$71				5000					500
12 00	612 00		612 00					200		†						500
10 50	408 50		408 50	408	800	300										600
9 00	414 00		414 00	414					10 00							
8 00	400 00		400 00	400					6 00							
12 00	552 00		552 00	502				50	8 00					87		300
12 00	600 00		600 00	525	800	400	75					1	6 00			500
18 00	900 00		900 00	900												150
4 75	242 25	\$60	302 25	267				35	+++							
9 00	351 00		351 00	136	1100	400	165									700
4 00	188 00		188 00					*		*						
4 50	198 00		198 00							1 50						
6 00	276 00		276 00					15		2 00						
10 50	504 00		504 00							3 50						
12 00	624 00		624 00					187		3 50	1000			7		100
4 50	234 00		234 00							2 00						100
12 00	312 00	20	332 00					10		3 00						300
6 00	234 00		234 00							3 50						25
9 00	414 00		414 00							3 00						100
6 50	258 50		253 50													
8 50	382 50		382 50							2 00						
9 00	351 00		351 00							3 00						40
9 00	468 00		468 00					200		3 00						300
9 00	504 90		504 90							3 50						
6 00	294 00		294 00							2 00						
9 00	468 00		468 00							3 50						100
10 00	440 00		440 00							3 50						100
9 00	468 00		468 00					120		3 00						350
9 00	428 00		428 00					70		2 50						500
7 30	358 80		358 80					50		3 00						200
14 40	748 80		748 80					280		3 00	2000					600
10 50	504 00		504 00							3 00						100
11 50	598 00		598 00							3 50						
15 00	750 00		750 00							4 00	7000	1	25 00			150
9 00	351 00		351 00					100		3 25				2		200
9 00	432 00		432 00					150		3 50						200
8 00	312 00		312 00					40		3 50						125
7 50	292 50		292 50					25		4 00						150
8 00	312 00		312 00					50		3 50						100
9 00	387 00		387 00							3 50						
7 50	322 50		322 50							2 00						125
6 00	234 00		234 00							†						50
8 00	384 00		384 00					150		3 50						300
6 00	294 00		294 00							3 00						100
7 50	380 00		380 00													
8 50	433 50		433 50					50		3 50						100
9 00	432 00		432 00							3 50				34		25
8 00	400 00		400 00					100		3 00						350
6 00	298 00		298 00							3 00						100
10 50	535 50		535 50					150		†						200

* Lives at home and gives wages to parents.

† Lives at home and supports family.

† Lives at home and pays no stated amount for board.

TABLE No. 2—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist.....	22	U. S.	U. S.	s	—	—	—	—	—	51	1	laid off
".....	27	"	"	s	—	—	—	—	—	53	—	—
".....	20	"	"	s	—	—	—	—	—	50	2	accident
".....	29	"	"	s	—	—	—	—	—	50	2	laid off
".....	24	"	"	s	—	—	—	—	—	50	2	vacation and laid off
".....	16	"	"	s	—	—	—	—	—	52	—	—
Laborer.....	21	"	"	s	—	—	—	—	—	35	17	sick and no work
Iron worker.....	21	"	"	s	—	—	—	—	—	6	46	worked for father
Machinist.....	23	"	"	s	—	—	—	—	—	50	2	vacation
Iron worker.....	21	"	"	s	—	—	—	—	—	50	2	laid off
".....	24	"	"	s	—	—	—	—	—	52	—	—
".....	22	"	"	s	—	—	—	—	—	47	5	laid off
".....	29	"	"	s	—	—	—	1	1	45	7	holidays and laid off
".....	21	"	"	s	—	—	—	—	—	44	8	laid off
".....	31	"	"	s	—	—	—	—	—	51	1	"
Machinist.....	20	"	"	s	—	—	—	—	—	51	1	"
".....	22	"	Ireland	s	—	—	—	—	—	43	9	out of work
".....	30	"	Germany	s	—	—	—	—	—	50	2	vacation
".....	21	"	U. S.	s	—	—	—	—	—	48	4	"
".....	20	"	"	s	—	—	—	—	—	49	3	accident and laid off
".....	22	"	"	s	—	—	—	—	—	48	4	laid off
".....	20	"	England	s	—	—	—	—	—	43	9	accident and laid off
".....	29	"	U. S.	s	—	—	—	—	—	48	4	sick and laid off
Painter.....	31	Canada	Canada	wr	—	—	—	—	—	43	9	laid off
".....	38	U. S.	U. S.	wr	—	—	—	—	—	39	13	out of work
Laborer.....	32	"	"	wr	—	—	—	—	—	47	5	sick
".....	49	Ireland	Ireland	wr	—	—	—	—	—	39	13	sick and laid off
Blacksmith.....	33	Scotland	Scotland	wr	1	1	1	—	1	50	2	laid off
Machinist.....	32	U. S.	Ireland	wr	—	—	—	—	—	50	2	sick and vacation
Iron worker.....	38	U. S.	U. S.	wr	1	1	1	—	1	52	—	—
NICHOLS & SHEPARD CO.												
Wood worker.....	55	U. S.	"	m	—	—	—	—	1	48	4	laid off
".....	62	Germany	Germany	m	—	—	—	—	1	43	9	laid off and vacation
Molder.....	41	U. S.	U. S.	wr	—	—	—	1	1	47	5	sick and laid off
".....	27	"	"	wr	1	1	—	—	1	48	4	laid off
Blacksmith.....	56	"	"	wr	—	—	—	—	—	48	4	"
Wood worker.....	35	"	"	m	2	2	1	—	3	52	—	—
Iron worker.....	43	"	"	m	3	3	1	—	4	40	12	laid off and vacation
Laborer.....	23	"	"	m	—	—	—	—	1	49	3	laid off
Molder.....	40	"	Ireland	m	7	7	4	—	8	43	9	laid off and accident
".....	50	"	U. S.	m	2	1	1	—	2	48	9	accident
".....	45	"	"	m	—	—	—	—	1	48	4	laid off
Laborer.....	30	"	"	m	1	1	—	—	2	51	1	"
Molder.....	39	"	"	m	1	1	1	—	2	48	4	"
".....	43	"	"	m	3	3	3	1	5	45	7	laid off and vacation
".....	32	"	"	m	—	—	—	—	1	52	—	—
".....	45	Ireland	Ireland	m	3	3	3	—	4	45	7	sick and laid off
".....	37	U. S.	U. S.	m	4	4	2	—	5	47	3	accident and laid off
Wood worker.....	50	Switz	Switz	m	1	1	—	—	2	59	3	laid off
Belt maker.....	67	U. S.	U. S.	m	1	1	—	—	2	50	2	sick and laid off
Wood worker.....	25	"	"	m	—	—	—	—	1	51	1	laid off
".....	37	"	"	m	—	—	—	—	1	51	1	vacation

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wage.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 50	\$535 50		\$535 50					\$156		\$3 50						\$400
9 00	468 00		468 00					200		5 00						500
9 00	450 00		450 00					100		5 00						200
13 50	675 00		675 00							4 80						450
13 50	675 00		675 00					130		4 80						450
9 00	468 00		468 00							2 50						150
7 50	262 50		262 50					40		3 00						300
9 00	54 00		54 00							3 00						100
9 00	450 00		450 00					75		3 50						400
9 00	450 00		450 00							3 50						100
12 00	624 00		624 00							3 75						600
12 00	564 00		564 00							4 00						
10 80	472 50		472 50							3 50	\$3000					40
9 00	396 00		396 00							4 50						200
12 00	612 00		612 00							4 50						
9 00	459 00	\$60	519 00					50		3 00						400
8 00	344 00		344 00					230		3 00						100
10 50	525 00		525 00							3 00	2000					400
12 00	576 00	50	626 00							4 00	2000					150
9 00	441 00		441 00					100		3 50						
10 50	504 00		504 00					5		3 50	2000					150
8 00	344 00		344 00							3 50						400
9 00	432 00		432 00							3 50	1000					100
12 00	516 00		516 00							3 75	1000					
12 00	468 00		468 00							5 50				14		500
7 50	352 50		352 50							3 50						75
7 50	292 50		292 50							3 00						
8 00	400 00		400 00					100		3 50				40		2000
15 00	750 00		750 00					50		3 00				18		200
9 00	468 00		468 00							3 00						600
11 00	528 00		528 00					200		6 00						
12 00	516 00	100	616 00					150		3 50	500			44		1600
15 00	705 00		705 00					150		3 00	1350	1	\$7 00			300
18 00	864 00		864 00							3 00	100	1	6 00			100
13 50	648 00		648 00					300		3 50	100	1	7 00			3500
12 00	624 00		624 00	\$524				100	\$8 75		2100	1	7 00			800
12 00	480 00		480 00	400	\$700	\$300	\$80				500					1000
9 00	441 00		441 00	316	900	850	50	75			1100	1	7 00			1000
18 00	774 00		774 00	699	1400	1325	75				100	1	7 00			500
18 00	774 00		774 00	774					15 00							500
18 00	864 00		864 00	561				300	8 00		100	1	6 00			1000
9 00	459 00		459 00	349	1000		40	50								1100
20 00	980 00		980 00	980					6 00							
20 00	900 00		900 00	600	2000	800		300			2100	1	7 00			2000
19 50	1014 00	170	1184 00	814	1700	600	270	100			2000	1	2 00			3000
12 75	573 75		573 75	416	1000		7	150			100	1	7 00	8		1100
21 00	987 00		987 00	747	2000		40	200			2100	1	7 00			2700
8 50	416 50		416 50	416					8 00		2700	2	11 00	20		500
10 00	500 00		500 00	425	2500			75			2000					2500
9 50	484 50		484 50	339	1900	500	145				100	1	7 00			900
9 00	459 00		459 00	459					8 00							200

† Boards at home but pays no stated amount.

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker	83	U. S.	U. S.	m	2	2			3	46	6	laid off and accident
"	28	"	"	m	1	1			1	45	7	laid off
"	46	"	"	m	1	1			2	43	9	sick and laid off
"	27	"	"	m	1	1			2	44	8	"
"	37	Germany	Germany	m	1	1			2	52		
"	39	U. S.	U. S.	m	2	2			3	49	3	laid off
"	34	"	"	m	2	2		1	2	52		
"	71	"	"	m	1	1			1	49	3	sick and laid off
"	26	"	Germany	m	1	1			2	50	2	out of work
"	41	"	U. S.	m	2	2	2		3	47	5	sick and laid off
"	42	"	"	m	3	3	3		4	52		
"	26	"	England	m	1	1	1		2	50	2	laid off
"	60	"	U. S.	m	1	1			1	51	1	sick
"	50	"	"	m	1	1	1		2	48	4	laid off
"	43	"	"	m				1	2	50	2	sick
"	46	"	"	m	1	1	1		2	51	1	laid off
"	45	"	"	m	4	4	3		5	46	6	sick
"	28	England	England	m	1	1			1	48	4	"
"	44	U. S.	U. S.	m	1	1		1	2	46	6	laid off
Iron worker	43	"	Ireland	m	2	2	3		3	50	2	"
"	40	"	England	m	3	3	3		4	50	2	sickness
Machinist	39	"	U. S.	m	3	3	2		4	52		
Blacksmith	40	"	"	m	3	3			1	22	30	sick and no work
"	59	"	"	m	2	1	1		2	49	3	laid off
Iron worker	27	"	"	m					1	52		
Machinist	48	Scotland	Scotland	m	3	2	1		3	52		
Painter	46	U. S.	U. S.	m	3	3	2		4	47	5	laid off
"	72	"	"	m	1	1		2	3	39	13	"
"	67	"	"	m	2	2	1		3	46	6	laid off and accident
"	30	"	"	m	1	1			2	46	6	laid off and sick
"	40	Germany	Germany	m	5	5	1		6	44	8	laid off
"	33	Ireland	Ireland	m	3	3	1		4	41	11	sick and laid off
"	48	U. S.	U. S.	m	2	2			1	48	9	laid off
"	47	Ireland	Ireland	m	2	2			3	46	6	"
"	30	U. S.	U. S.	m					1	25	27	sick and laid off
"	30	"	"	m	2	2			3	42	10	laid off
"	38	"	U. S.	m	1	1			2	47	5	"
"	47	"	"	m	2	2	2		2	39	13	laid off and vacation
"	50	"	"	m	3	3		2	3	43	9	sick and laid off
"	23	"	"	m	1	1			2	50	2	vacation
Laborer	29	"	"	m	3	3	2		4	41	11	sickness and laid off
Molder	28	"	"	m					1	49	3	laid off
"	57	"	"	m	2	2			1	49	3	sick and laid off
Laborer	56	Ireland	Ireland	m	6	5	2		6	50	2	laid off
Molder	49	U. S.	U. S.	m	4	4	3		5	46	6	sick and laid off
"	23	"	"	m	2	2			3	35	17	"
"	31	"	"	m	1	1			2	39	13	accident and laid off
"	27	"	"	m	1	1			2	46	6	sick and laid off
"	40	"	"	m	3	3	1		4	49	3	"
Laborer	29	Canada	Scotland	m	1	1			2	31	21	out of work
Molder	38	U. S.	U. S.	m	1	1			2	52		
"	25	"	Holland	m	3	2			3	17	36	out of work
Core maker	40	"	U. S.	m					1	52		

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
8 00	\$414 00	\$70	\$484 00	\$384				\$100	\$8 00		\$100	1	\$7 00			\$1200
10 50	472 50		472 50	322				150	6 00							800
12 00	516 00		516 00	366	\$1200		\$150				2100	1	7 00			1800
9 00	398 00		398 00	346				50	6 25		100	1	7 00			
7 50	390 00		390 00	390					8 00		1100	1	7 00	38		250
8 25	404 25	30	434 25	359	900	\$325	75				1000	1	7 00			450
9 00	468 00		468 00	318	800	350	150				100	1	7 00			800
11 00	589 00	30	619 00	369				200	free		100	1	7 00			1500
9 50	475 00		475 00	275	300			200			100	1	7 00			500
10 00	470 00		470 00	420	1500		50				100	1	7 00			1800
11 00	572 00		572 00	472	1000	400	100				1100	1	7 00			800
10 00	525 00		525 00	499	700	450	36				1100	1	7 00			500
12 00	612 00		612 00	312				800	8 00							900
9 50	456 00		456 00	311	1500	300	145				100	1	7 00			1500
11 00	550 00		550 00	450				100	8 50		2900	1	7 00			8000
11 00	561 00		561 00	531	2000		30				2100	1	7 00			2500
11 00	506 00		506 00	356	1500	600	150				2100	1	7 00			1500
9 00	432 00		432 00	362				70	6 00		2100	1	7 00	19		300
9 00	414 00	50	464 00	464	1400						108	1	7 00			2500
9 00	450 00		450 00	290	1000	400	120				1000					900
10 50	525 00		525 00	525					10 00		1225	2	10 00			300
11 50	598 00		598 00	448	1000		150				1100	1	7 00			1200
9 00	198 00		198 00	296					8 00		100	1	7 00			1200
10 50	514 50	1000	1514 50	644	3000	200	225	645								10000
6 00	312 00		312 00	212				100	7 00							700
19 23	1000 00		1000 00	850	1800	1450	150				4100	1	7 00	26		800
8 50	399 50	85	484 50	424	2000		10				100	1	7 00			2500
11 00	429 00		429 00	404	2000	350	25				1100	1	7 00			3000
10 00	460 00		460 00	360	1200	400	100				100	1	7 00			1200
8 00	368 00		368 00	268	600	100	100				100	1	7 00			700
8 00	352 00		352 00	277	1400	450	75							36		1450
9 00	399 00		399 00	299	1000	450	70				1000	1	5 00	15		450
8 50	365 50		365 50	345	1500		20				100	1	7 00			2000
8 00	368 00		368 00	368					8 00		100	1	7 00	80		300
8 00	200 00		200 00						\$5 00							75
8 00	336 00		336 00	336					7 00							300
8 00	376 00		376 00	304	1500			72			3100	1	7 00			1000
8 75	341 25	200	541 25	291	2000	600	250				1000					2000
12 00	516 00	72	588 00	458	1200			130			2100	1	7 00			2000
8 60	430 00		430 00	430					5 50		2100	1	7 00			150
9 00	399 00		399 00	399					8 00							225
15 00	735 00		735 00	435				300	6 00		2100	1	6 00			400
15 00	735 00		735 00	695	950	100		40								1000
12 00	600 00	300	900 00	600	1000			300						35		1500
16 50	759 00		759 00	479				280	10 00		100	1	7 00			1500
11 90	416 50		416 50	416					7 00		100	1	6 00			500
12 00	468 00		468 00	468					8 00		200	2	13 00			125
15 00	690 00		690 00	690					6 00							300
9 00	441 00		441 00	416				25	6 00			1	1 00			500
9 00	279 00		279 00	279					8 00					2	\$300	300
12 00	624 00		624 00	524				100	8 00		4500	1	15 00			500
10 50	178 50		178 50	258					5 00							150
12 00	624 00		624 00	624					5 00		100	1	7 00			500

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	43	U. S.	U. S.	m	1	1			2	50	2	laid off
"	57	"	"	m	1	1			2	48	4	"
"	50	"	"	m	3	2			5	51	1	sick
"	51	"	"	m	4	4			8	52		"
"	49	Ireland	Ireland	m	4	4	2		6	51	21	accident and laid off
"	35	U. S.	U. S.	m	1	1	1		2	46	6	accident and sick
Teamster and team	41	"	"	m	5	5	3		8	51	1	sick
Wood worker	23	"	"	m	1	1			2	43	9	laid off
Teamster	49	"	"	m	2	1			3	52		"
Laborer	40	"	"	m	2	2	1		3	51	1	sick and laid off
Blacksmith	34	Ireland	Ireland	m	2	2	2		4	46	6	laid off and sick
Machinist	28	U. S.	U. S.	m					1	48	4	laid off and holidays
"	32	England	England	m					2	47	5	laid off and vacation
Engineer	50	Scotland	Scotland	m	1	1	1		2	50	2	laid off
Blacksmith	43	Canada	Canada	m	4	4	2		6	47	5	"
Machinist	38	U. S.	U. S.	m	1	1			2	48	4	"
"	22	Canada	Canada	m					1	49	2	"
"	22	England	England	m					1	49	2	"
"	46	U. S.	Scotland	m	2	2	2		4	48	4	"
"	46	Ireland	Ireland	m	6	6	4	1	8	46	6	laid off and sick
"	64	U. S.	U. S.	m					1	45	7	"
"	25	"	"	m	1	1			2	42	10	"
"	45	"	"	m	1	1	1		2	47	5	sick and laid off
"	28	"	"	m	1	1			2	49	3	laid off
"	35	"	"	m	3	3	2		5	51	1	accident & holidays
"	29	"	Ireland	m					1	40	12	laid off and sick
"	43	"	"	m	1	1			2	46	6	laid off and vacation
"	35	Holland	Holland	m					1	47	5	sick and laid off
"	24	Canada	U. S.	m					1	48	4	laid off
"	52	U. S.	England	m	3	3	2		5	47	5	sick and laid off
"	24	"	U. S.	m					1	49	2	laid off
Engineer	31	"	"	m	1	1			2	48	4	laid off and sickness
Painter	27	"	"	m	1	1	1		2	46	6	out of work and laid off
"	41	"	"	m	2	2			3	40	12	accident and laid off
"	71	England	England	m				1	2	39	12	laid off
"	25	U. S.	U. S.	m					1	48	4	laid off and vacation
"	57	"	"	m	2	2			3	46	6	sick and laid off
"	48	"	"	m	2	2	1		3	50	2	sick
Wood worker	57	"	"	m	2	2	1		3	29	13	laid off
"	40	"	Prussia	m	4	4	2		6	49	3	"
"	38	"	U. S.	m					1	48	9	sick and vacation
"	45	"	Canada	m	4	3	1		4	49	2	laid off
"	53	"	U. S.	m	1	1	1		2	52		"
"	38	"	"	m	3	3	2		4	52		"
"	35	"	"	m	1	1	1		2	52		"
"	54	"	"	m				1	2	52		"
"	37	"	"	m	3	3	2		4	44	8	sick and laid off
Laborer	27	"	"	m	1	1		1	2	49	2	laid off
Machinist	36	"	"	m	5	5	4		6	52		"
Engineer	36	"	"	m	1	1	1		2	26	26	sick
Boiler maker	34	"	"	m	1	1			2	51	1	"
Wood worker	38	"	Scotland	m	2	2	1		3	47	5	sick and laid off
Painter	28	"	U. S.	m	3	3	1		4	48	4	sick and no work

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$8 50	\$425 00	-----	\$425 00	\$321	\$800	\$450	\$104	-----	-----	-----	\$100	1	\$7 00	-----	-----	\$550
9 00	432 00	-----	432 00	432	800	-----	-----	-----	-----	-----	100	1	7 00	-----	-----	1000
9 00	459 00	-----	459 00	339	675	150	120	-----	-----	-----	100	1	7 00	-----	-----	675
13 50	702 00	-----	702 00	602	750	300	100	-----	-----	-----	100	1	7 00	-----	-----	1000
9 00	279 00	\$156	435 00	435	2000	-----	-----	-----	-----	-----	-----	-----	-----	25	-----	2200
8 25	379 50	-----	379 50	279	-----	-----	-----	\$100	\$6 00	-----	2100	1	7 00	-----	-----	2800
12 00	612 00	-----	612 00	612	-----	-----	-----	-----	6 00	-----	100	1	7 00	-----	-----	200
9 00	387 00	-----	387 00	237	-----	-----	-----	150	6 00	-----	100	1	7 00	-----	-----	500
10 50	546 00	-----	546 00	496	-----	-----	-----	50	6 00	-----	-----	-----	-----	-----	-----	-----
9 00	459 00	-----	459 00	399	800	230	60	-----	-----	-----	100	1	7 00	-----	-----	1000
11 75	540 50	-----	540 50	488	1400	150	52	-----	-----	-----	2100	1	7 00	17	-----	1350
7 50	360 00	-----	360 00	-----	-----	-----	-----	-----	\$5 00	-----	-----	-----	-----	-----	-----	100
10 50	493 50	-----	493 50	-----	-----	-----	100	-----	3 75	-----	50	1	3 00	15	-----	200
12 00	600 00	-----	600 00	620	-----	-----	-----	-----	8 00	-----	2000	-----	-----	46	-----	400
10 50	493 50	-----	493 50	493	-----	-----	-----	-----	8 00	-----	100	1	7 00	10	-----	500
12 00	576 00	50	626 00	514	1500	-----	37	75	-----	-----	100	1	7 00	-----	-----	3000
8 00	392 00	-----	392 00	392	-----	-----	-----	-----	8 40	-----	-----	-----	-----	9	-----	500
7 00	343 00	-----	343 00	243	-----	-----	-----	100	6 00	-----	100	1	7 00	9	-----	500
9 60	460 80	-----	460 80	460	400	50	-----	-----	-----	-----	2100	1	7 00	-----	-----	800
8 00	368 00	-----	368 00	418	-----	-----	-----	-----	8 00	-----	100	1	7 00	27	-----	-----
10 50	472 50	-----	472 50	322	1800	-----	100	50	-----	-----	50	1	3 00	-----	-----	2300
9 50	399 00	-----	399 00	221	-----	-----	175	6 00	-----	-----	-----	-----	-----	-----	-----	350
12 90	606 30	900	1506 30	576	3000	-----	130	800	-----	-----	-----	-----	-----	-----	-----	15000
11 10	543 90	-----	543 90	343	-----	-----	200	-----	10 00	-----	1150	2	10 00	-----	-----	300
9 00	459 00	-----	459 00	459	-----	-----	-----	-----	8 00	-----	100	1	7 00	-----	-----	300
10 50	420 00	-----	420 00	360	-----	-----	-----	60	7 00	-----	50	1	3 00	-----	-----	400
11 10	510 60	-----	510 60	510	950	-----	-----	-----	-----	-----	100	1	7 00	-----	-----	1150
10 50	493 50	-----	493 50	293	2000	-----	200	-----	-----	-----	2100	1	7 00	28	-----	2500
9 50	456 00	-----	456 00	456	-----	-----	-----	-----	6 00	-----	-----	-----	-----	5	-----	200
10 50	493 50	-----	493 50	493	-----	-----	-----	-----	10 00	-----	2900	1	7 00	-----	-----	500
11 00	539 00	-----	539 00	389	1600	1000	100	50	-----	-----	2100	1	7 00	-----	-----	1200
7 80	374 40	-----	374 40	322	-----	-----	52	7 00	-----	-----	100	1	7 00	-----	-----	450
9 00	414 00	-----	414 00	314	-----	-----	100	8 00	-----	-----	2100	1	7 00	-----	-----	300
12 00	480 00	-----	480 00	309	1500	500	100	-----	-----	-----	-----	-----	-----	-----	-----	1500
8 50	331 50	-----	331 50	206	-----	-----	125	7 00	-----	-----	-----	-----	-----	59	-----	250
12 00	576 00	-----	576 00	376	1000	-----	200	-----	-----	-----	3000	-----	-----	-----	-----	1300
8 00	368 00	36	404 00	404	-----	-----	-----	-----	12 00	-----	-----	-----	-----	-----	-----	250
15 00	750 00	-----	750 00	630	2000	500	120	-----	-----	-----	3100	1	7 00	-----	-----	2100
8 50	331 50	-----	331 50	331	-----	-----	-----	-----	10 00	-----	-----	-----	-----	-----	-----	500
9 75	477 75	-----	477 75	427	1500	400	50	-----	-----	-----	2100	1	7 00	-----	-----	1500
10 50	451 50	-----	451 50	401	-----	-----	50	7 00	-----	-----	1100	1	7 00	-----	-----	250
11 00	539 00	-----	539 00	439	700	150	100	-----	-----	-----	3100	1	7 00	-----	-----	850
17 30	900 00	-----	900 00	700	2500	-----	200	-----	-----	-----	2000	-----	-----	-----	-----	3500
11 50	598 00	-----	598 00	498	900	-----	100	-----	-----	-----	100	1	7 00	-----	-----	2000
11 00	572 00	-----	572 00	372	1100	400	200	-----	-----	-----	1100	1	7 00	-----	-----	1800
15 00	780 00	100	880 00	630	3000	500	250	-----	-----	-----	100	1	7 00	-----	-----	3500
8 50	374 00	-----	374 00	374	-----	-----	-----	-----	6 00	-----	100	1	7 00	-----	-----	800
8 50	416 50	-----	416 50	391	-----	-----	25	7 00	-----	-----	1100	1	7 00	-----	-----	200
17 30	900 00	-----	900 00	680	1900	200	220	-----	-----	-----	1100	1	7 00	-----	-----	2000
12 00	812 00	120	432 00	432	-----	-----	-----	-----	8 00	-----	2100	1	7 00	-----	-----	1900
10 00	510 00	-----	510 00	400	900	300	60	50	-----	-----	2100	1	7 00	-----	-----	1200
8 50	339 50	200	599 50	424	1100	600	115	60	-----	-----	-----	-----	-----	-----	-----	5000
10 50	504 00	20	524 00	424	1500	650	100	-----	-----	-----	2100	1	7 00	-----	-----	1200

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.						Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.		
Painter	51	U. S.	U. S.	m	2	2	1		3	29	28	sick and no work	
Machinist	44	"	"	m	1	1	1		2	49	3	laid off	
"	50	"	"	m	3	2	1		3	47	5	sick and laid off	
"	46	"	"	m					1	48	4	laid off	
"	29	"	"	m					1	52			
Boiler fitter	40	"	"	m					1	49	3	laid off	
"	32	"	Ireland	m	1	1			2	49	3	"	
"	33	"	U. S.	m	3	5	3		6	46	6	laid off and accident	
"	34	"	England	m	3	3	2		4	49	3	laid off	
"	46	Ireland	Ireland	m	5	5	4		6	51	1	holidays	
"	42	Canada	Canada	m	2	2	2		3	48	4	laid off and holidays	
"	29	U. S.	U. S.	m	1	1		1	4	46	6	sick and laid off	
"	41	England	England	m	2	2	2		3	46	6	"	
Wood worker	32	U. S.	U. S.	m	2	2	1		3	48	4	"	
Iron worker	31	"	"	wt				1	1	47	5	"	
Machinist	50	"	"	m	1	1	1	2	4	49	3	laid off	
"	38	"	"	m	1	1	1	1	3	49	3	"	
Painter	35	"	"	m	4	4	2		5	50	2	"	
Blacksmith	45	Canada	Ireland	m	7	6	3		7	48	4	"	
"	29	U. S.	Germany	m					1	48	4	laid off and vacation	
"	52	Canada	Ireland	m	1	1	1		2	48	4	sick and laid off	
Wood worker	31	U. S.	U. S.	m	3	3	2		4	43	9	laid off and accident	
Pattern maker	63	Scotland	Scotland	m	2	2	1		3	52			
"	35	"	"	m	2	2	2		3	52			
Wood worker	45	U. S.	U. S.	m	1				1	50	2	vacation	
"	49	"	"	m	2	2	1		3	50	2	laid off	
Teamster	49	"	"	m	1	1	1		2	52			
Laborer	46	"	"	m	2	2	1		3	47	5	laid off and accident	
Machinist	58	"	"	m	1	1	1		2	52			
Blacksmith	43	"	"	m	1	1			2	49	3	laid off	
"	35	"	"	m	5	5	3		6	47	5	"	
"	42	"	"	wt				1	1	49	3	"	
Machinist	52	"	"	m	1				1	46	6	"	
Laborer	27	Canada	"	m					1	49	3	sick and laid off	
Blacksmith	58	England	England	m	2	2			3	51	1	laid off	
"	43	U. S.	U. S.	m	1	1			2	48	4	sick and laid off	
"	56	"	"	m	2	2			3	46	6	"	
"	38	"	"	m					1	52			
"	44	Canada	Canada	m	3	6	4		7	51	1	laid off	
Machinist	38	U. S.	U. S.	m	1	1			2	47	5	"	
"	40	"	"	m	2	2	1		3	44	8	sick and laid off	
Wood worker	28	"	England	m				1	2	51	1	vacation	
Engineer	47	"	U. S.	m	9	8	4		9	50	2	sick and laid off	
Fireman	57	"	"	m	1				1	48	4	"	
Molder	40	"	"	m	2	2	2	2	5	52			
Wood worker	39	"	"	m					1	52			
"	29	"	"	m	2	2			3	48	4	laid off and vacation	
"	35	"	"	wt						43	9	sick and laid off	
"	75	"	"	m					1	43	9	laid off	
"	59	"	"	m					1	41	11	sick and laid off.	
"	21	"	"	m					1	46	6	laid off	
"	32	"	"	m	1	1			2	46	6	"	
"	53	"	"	m					1	44	8	"	

TABLE No. 2.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt. t.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
10 50	\$304 50		\$304 50	\$404	\$700	\$500					\$1000					
12 20	597 80		597 80	807	1800		\$200	\$30			2100	1	\$7 00			\$2000
8 50	399 50		399 50	899							100	1	7 00			500
10 40	499 20		499 20	457	2000	1200	42		\$9 00		2100	1	7 00			1200
8 50	442 00		442 00	392	800	275	150				2100	1	7 00			725
10 50	514 50	\$120	634 50	484	1800	400	100	50			3350	1	7 00			2000
10 70	524 30		524 30	475	1000	300	49				3100	1	7 00			900
8 50	391 00		391 00	387							100	1	7 00			200
10 30	499 80	70	569 80	569					8 00		1100	1	7 00			800
9 80	499 80	50	579 80	504	1510		75		8 00		100	1	7 00	33		3000
9 00	432 00		432 00	317	1200	1100	115				100	1	7 00	25		200
9 50	437 00		437 00	437					4 50		100	1	7 00			200
11 00	506 00		506 00	391	800	850	145				1100	1	7 00	21		850
10 50	504 00		504 00	344	1200	500	180				100	1	7 00			950
8 50	399 50		399 50	399			†									100
12 50	661 50	48	709 50	609	2000	600	100				3100	1	7 00			2200
14 80	700 70		700 70	400	1500		150	150								2100
9 00	450 00	72	522 00	442	1200	440	80				1100	1	7 00			1900
12 00	576 00	180	756 00	556	2000	500	200				1100	2	12 00	44		2000
11 00	528 00		528 00	443	1500	500	86				100	1	7 00			1400
9 75	468 00	144	612 00	462	1200	700	150				2000			41		900
10 50	451 50		451 50	451					8 00		2100	1	7 00			
19 23	1000 00	156	1156 00	806	2500		150	200			7000			30		4000
12 50	702 00	650	1352 00	502	3000	1400	100	750			2100	1	7 00	14	\$800	4000
10 50	525 00		525 00	475	1100	535	50				2100	1	7 00			1000
12 00	600 00		600 00	516	1400	500	84				2900	1	7 00			1400
10 50	516 00	84	600 00	390	1000	700	120	120			100	1	7 00			2300
8 00	376 00		376 00	376					10		2100	1	7 00			6000
19 23	1000 00	150	1150 00	650	3500		500				500					7000
10 50	514 50	120	634 50	384	2500	550	200	50			1100	1	7 00			3000
9 00	423 00		423 00	423					8 00		100	1	7 00			60
11 40	558 60		558 60	468	1400	300	50	40			1100	1	7 00			1500
9 50	437 00		437 00	437					12 00		3100	1	7 00			600
8 00	392 00		392 00	382	600	450	50				100	1	7 00	26		350
12 50	688 50		688 50	688					10 00					39		300
9 00	432 00	75	507 00	267	1800	200	200	40			100	1	7 00			2500
10 50	433 00		433 00	458	1600		25				3100	1	7 00			2000
9 00	466 00		466 00	393				75	6 00			2	8 00			400
7 50	382 50		382 50	382					10 00		100	1	7 00	12	200	200
10 50	498 50		498 50	343	2000		50	100								2500
9 00	396 00	200	596 00	346				250	8 00		4100	1	7 00			3500
12 00	612 00		612 00	557	1500	400	55				1100	1	7 00			1900
12 00	600 00	70	670 00	670	800						100	1	7 00			1000
9 00	432 00		432 00	332	1000	140	75	75			1600	1	7 00			1300
18 00	936 00		936 00	396	3000	300	340	200			2100	1	7 00			5000
12 50	702 00		702 00	502	1500	700	200				3100	1	7 00			1500
7 50	390 00		390 00	390					9 00							1000
10 00	430 00		430 00							\$3 50	100	1	7 00			4000
12 00	516 00	75	591 00	416	2000		75	100			100	1	7 00			2500
11 00	461 00		461 00	378	2000	100	75				2100	1	7 00			
9 00	414 00		414 00	264	700	550	150				3100	1	7 00			250
9 00	414 00		414 00	414					8 00		1100	1	7 00			200
9 00	396 00	100	496 00	396	700		100									2500

† Lives at home and supports family.

TABLE NO. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker	24	U. S.	U. S.	m	1	1			2	50	2	laid off
"	23	"	"	m	1	1			2	51	1	vacation
"	44	"	"	m	2	2			4	49	3	laid off and vacation
"	53	"	"	m	1	1	1	1	3	48	4	laid off
"	55	"	"	m					1	50	2	"
"	61	"	"	m					1	45	9	sick and laid off
Boiler fitter	35	"	Ireland	m	2	2	2		5	50	2	sick and holidays
Machinist	38	England	England	m	4	4	2		5	51	1	holidays
"	38	U. S.	U. S.	m	2	2			1	50	2	sick and laid off
"	32	"	"	m	2	2	2		3	47	5	"
"	45	"	"	m	4	2	2		3	39	13	"
"	43	Ireland	Ireland	m	2	2	2		4	52		"
"	39	U. S.	U. S.	m	2	2	2		4	45	4	sick and laid off
"	42	"	Ireland	m	4	4	2		5	52		"
"	52	England	England	m	4	2	2		3	43	9	sick and laid off
"	34	U. S.	Ireland	m	2	2	1		3	48	4	"
"	28	"	U. S.	m					1	49	3	laid off
"	43	"	England	m	8	7	3		8	51	1	"
"	43	"	U. S.	m	6	5	3		6	50	2	"
"	65	"	"	m	1				1	48	4	"
"	44	Germany	Germany	m	1	1	1		2	35	17	sick and laid off
"	49	U. S.	U. S.	m				1	2	43	9	vacation
"	37	"	Ireland	m	2	2	2		3	48	4	laid off
"	53	"	U. S.	m	4	2	1	1	4	48	4	"
"	56	Ireland	Ireland	m	7	5	4		6	45	4	"
"	24	U. S.	U. S.	m					1	43	9	sick and laid off
"	25	England	England	m					1	43	9	laid off and vacation
"	60	Canada	U. S.	m	2	1		2	4	43	9	sick and laid off
"	41	Sweden	Sweden	m	6	5	4		6	47	5	"
"	22	U. S.	U. S.	m					1	39	13	"
"	50	"	"	m	3	1	1		2	47	5	laid off
"	33	"	"	m					1	48	4	sick and laid off
"	39	"	"	m	5	5	2		6	48	9	laid off
"	56	Scotland	Scotland	m	4	3	1		4	49	3	"
Laborer	39	U. S.	U. S.	m	2	2	1		3	49	3	"
Wood worker	30	"	England	m	1	1			2	51	1	vacation
"	28	"	U. S.	m	1	1			2	50	2	sick and laid off
"	28	"	"	m	2	2			3	52		"
"	30	"	"	m	2	2			3	49	3	sick
"	46	"	"	m	7	7	4		8	49	3	"
"	56	"	"	m	2				1	50	2	vacation
"	51	Ireland	Ireland	m	5	1			2	51	1	laid off
"	42	U. S.	U. S.	m	4	4	3		5	53		"
Machinist	31	"	"	m	1	1			2	39	13	laid off
"	33	"	"	m	1	1	1		2	51	1	"
"	38	"	"	wr	3	3	3		3	51	1	"
"	47	"	"	m	1				1	50	2	"
"	45	England	England	m					1	43	9	laid off and vacation
"	33	U. S.	U. S.	m				1	1	18	34	sick and vacation
"	37	"	Ireland	m	3	3			4	49	3	laid off
"	37	"	England	m	2	2	1		1	44	4	"
"	18	"	U. S.	s				2	2	52		"
Wood worker	35	"	"	s				2	2	51	1	vacation

TABLE NO. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 00	\$500 00	-----	\$500 00	\$300	\$1000	\$800	\$150	\$50			\$100	1	\$7 00			\$700
10 00	510 00	-----	510 00	465				45			3100	1	7 00			600
10 00	490 00	-----	490 00	490							100	1	7 00			200
15 00	720 00	\$75	795 00	775	1500		20				4000					2000
11 00	550 00	-----	550 00	500	1800	200	50				100	1	7 00			2000
12 00	516 00	-----	516 00	416	1700			100			100	1	7 00			2500
10 50	525 00	75	600 00	400	900		200									2500
14 70	749 70	-----	749 70	549	1500		50	150			2600	1	7 00	17		2500
17 50	875 00	-----	875 00	400	2500	400	275	200			2675	2	8 00			2300
9 00	423 00	-----	423 00	353	500	250	70				2100	1	7 00			500
12 00	466 00	120	586 00	588					10 00		2100	1	7 00			500
13 50	702 00	24	726 00	676	1500		50				2100	1	7 00	39		2000
10 00	480 00	-----	480 00	430	1500		50				2000					2000
17 80	899 80	-----	899 80	478	1500		321	100			2100	1	7 00			2300
12 00	516 00	-----	516 00	216					10 00		50	1	8 00	21	\$200	1400
9 00	432 00	-----	432 00	389	1500		43				1350	1	7 00			1200
9 00	441 00	-----	441 00	316	1000	650	125				100	1	7 00			500
9 00	459 00	-----	459 00	459					10 00							300
10 50	545 00	50	595 00	495	1200	600	100				1400	1	7 00			900
12 50	648 00	245	993 00	743	5000		50	200			4000	1	10 00			10000
12 00	420 00	-----	420 00	420					8 25		1000			26		600
10 50	451 50	15	466 50	441	2500		25				2000					4000
10 50	504 00	-----	504 00	326	2500	400	128	50								3000
9 00	432 00	-----	432 00	432					10 00		100	1	7 00			500
10 00	480 00	150	630 00	630	2500									38		\$500
9 00	387 00	-----	387 00	387					3 00		100	1	7 00			600
9 00	377 00	-----	387 00	287				100	5 00		2100	1	7 00	11		250
12 00	516 00	225	741 00	441	3500		300		6 00		100	1	7 00	16		4000
10 00	470 00	-----	470 00	470					6 50		100	1	7 00	10	200	250
9 00	351 00	-----	351 00	301			50				100	1	7 00			1500
9 00	451 20	-----	451 20	451					10 75		6000					400
13 50	648 00	168	816 00	636	2000	1000	180				1000	1	1 00			2000
13 50	580 50	-----	580 50	580	1825	900	50				2000					575
12 00	588 00	104	692 00	692					6 00		1000	1	8 00	20		500
9 00	441 00	-----	441 00	441					6 00		100	1	7 00			200
10 50	585 50	100	685 50	435	2500		200				100	1	7 00			2300
10 50	525 00	-----	525 00	425				100	6 00		100	1	7 00			500
10 50	516 00	-----	516 00	397	900	600	149					1	5 00			400
7 50	367 50	-----	367 50	367					6 00							100
12 00	588 00	-----	588 00	428	2200	1100		180			100	1	7 00			1300
12 00	600 00	-----	600 00	475	800		25	100			1100	1	7 00			1200
12 00	612 00	-----	612 00	512	1200			100				1	5 00	36		2000
18 75	975 00	-----	975 00	675	3500	1800	100				100	1	7 00			2500
12 00	468 00	-----	468 00	368					8 00		50	1	5 00			300
10 50	585 50	-----	585 50	435				100	10 00		2000	1				300
10 20	520 20	-----	520 20	520					7 00							200
10 50	525 00	156	681 00	581				100	7 00		2000					400
9 00	327 00	-----	327 00	327	2000	750	60				1000			17		2000
15 00	270 00	530	800 00	600				200	7 00		100	1	7 00			
10 50	514 50	-----	514 50	364	1000	500	150				100	1	7 00			800
12 00	576 00	100	676 00	520	2000	600		156			2800	1	7 00			2000
6 00	312 00	-----	312 00	312												
8 50	438 50	-----	438 50	438					8 00							100

‡ Lives at home and supports family.

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker.	31	U. S.	U. S.	s	—	—	—	1	1	48	4	laid off
Blacksmith.	28	"	"	s	—	—	—	2	3	49	2	"
Machinist.	29	"	Ireland.	s	—	—	—	—	—	50	2	"
"	32	"	U. S.	s	—	—	—	—	—	51	1	sick
"	21	Scotland	Scotland.	s	—	—	—	—	—	35	—	not in this country
"	22	U. S.	U. S.	s	—	—	—	—	—	52	—	"
"	30	England	England	s	—	—	—	—	—	48	4	sick and laid off
"	18	U. S.	U. S.	s	—	—	—	—	—	48	4	laid off
"	24	"	"	s	—	—	—	—	—	48	4	"
"	30	"	"	s	—	—	—	—	—	22	30	laid off, other business
"	19	"	"	s	—	—	—	—	—	50	2	laid off
Engineer.	23	"	"	s	—	—	—	—	—	48	4	sick
"	17	"	"	s	—	—	—	—	—	48	4	laid off
Painter.	18	"	Germany.	s	—	—	—	—	—	48	9	sick and laid off
"	21	"	U. S.	s	—	—	—	—	—	42	10	accident—laid off
Wood worker.	22	"	"	s	—	—	—	—	—	48	4	sick and laid off
Machinist.	26	"	Ireland.	s	—	—	—	—	—	47	5	laid off—vacation
Boiler fitter.	25	"	England	s	—	—	—	—	—	49	4	laid off
"	24	"	U. S.	s	—	—	—	—	—	48	4	"
"	23	"	"	s	—	—	—	—	—	51	1	holidays
Blacksmith.	24	"	Ireland	s	—	—	—	—	—	52	—	"
Machinist.	21	"	"	s	—	—	—	—	—	46	6	sick and laid off
Laborer.	18	"	U. S.	s	—	—	—	—	—	49	3	laid off
Machinist.	20	"	"	s	—	—	—	—	—	40	12	laid off and no work
Boiler fitter.	27	"	Ireland	s	—	—	—	—	—	49	8	laid off
Machinist.	20	"	U. S.	s	—	—	—	—	—	39	13	out of work
"	27	"	Ireland.	s	—	—	—	—	—	46	6	sick and laid off
Wood worker.	20	"	Scotland	s	—	—	—	—	—	25	17	laid off and no work
Laborer.	17	"	"	s	—	—	—	—	—	48	9	sick and no work
Molder.	22	"	U. S.	s	—	—	—	—	—	46	6	sick and laid off
"	24	"	Ireland.	s	—	—	—	—	—	48	4	"
"	23	"	"	s	—	—	—	—	—	43	9	laid off and vacation
"	15	"	U. S.	s	—	—	—	—	—	48	4	laid off
"	26	"	Ireland.	s	—	—	—	—	—	43	9	accident
Iron worker.	29	"	U. S.	s	—	—	—	—	—	29	23	laid off and no work
"	29	"	"	s	—	—	—	—	—	46	6	accident and laid off
Painter.	22	"	"	s	—	—	—	—	—	47	5	laid off
"	19	"	"	s	—	—	—	—	—	39	18	"
Molder.	26	"	Germany.	s	—	—	—	2	2	43	9	laid off and vacation
"	22	"	France	s	—	—	—	—	—	35	17	out of work
"	20	"	U. S.	s	—	—	—	—	—	49	3	sick and laid off
Laborer.	15	"	Scotland	s	—	—	—	—	—	49	3	laid off
Core maker.	21	"	U. S.	s	—	—	—	—	—	45	7	sick and laid off
Laborer.	16	Canada.	Canada.	s	—	—	—	—	—	10	42	school
Core maker.	17	U. S.	U. S.	s	—	—	—	—	—	48	4	laid off
UNION SCHOOL FURNITURE CO.												
Finisher.	42	U. S.	Canada.	m	5	5	3	—	6	49	3	sick and laid off
"	27	"	U. S.	m	—	—	—	8	4	48	4	"
"	24	"	"	m	1	1	—	—	2	49	8	"
"	24	"	"	m	2	2	—	—	3	43	9	"
"	29	Canada.	Canada.	m	2	2	1	—	3	35	17	accident and laid off
"	29	U. S.	U. S.	m	1	1	—	—	2	49	3	laid off and sickness
"	35	"	Germany.	m	2	2	2	—	3	49	3	sickness

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TABLE NO. 2.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
8 50	\$408 00		\$408 00	\$258				\$150	\$7 00		\$100	1	\$7 00			\$700
8 50	416 50		416 50	436					6 00		100	1	7 00			300
8 40	420 00		420 00							\$3 50						50
11 00	561 00		561 00					250		free						1000
8 50	297 50		297 50					70		3 50	100	1	7 00	8 mo	\$20	80
8 50	442 00		442 00					200		3 00						500
10 50	504 00		504 00					100		4 00	150	2	10 00	3	40	70
6 50	312 00		312 00							3 00						
9 00	432 00		432 00							4 00	50	1	3 00			60
9 00	198 00	\$260	458 00					300		↑	50	1	3 00			400
6 00	300 00		300 00							4 00						40
10 00	480 00		480 00					300		3 50	100	1	7 00			550
3 00	144 00		144 00					40		free						100
7 50	322 50		322 50					25		2 50	100	1	7 00			175
7 00	294 00		294 00							3 50						
9 00	432 00	25	457 00							1 50	100	1	7 00			100
9 50	445 50		445 50							3 00	50	1	5 00			50
8 50	404 00		404 00							3 50	100	1	7 00			
9 50	456 00		456 00					50		3 50	100	1	7 00			250
8 50	433 50		433 50							3 50	100	1	7 00			100
8 50	442 00		442 00					50		↑						50
8 50	391 00		391 00							3 00	100	1	7 00			50
5 00	245 00		245 00					30		1 50	100	1	7 00			
7 50	300 00		300 00							5 00						50
11 00	539 00		539 00							3 50						
7 50	292 50		292 50					60		3 50						100
9 00	414 00		414 00					75		3 50						500
10 00	350 00		350 00							↑	100	1	7 00			45
6 00	238 00		238 00					25		3 00						
12 00	552 00		552 00					115		3 50						250
12 00	576 00		576 00							4 00						25
16 40	722 40		722 40							3 50	100	1	6 00			50
3 00	144 00		144 00							*						
15 00	645 00		645 00					250		3 50						1000
8 25	239 25		239 25							3 50						
9 00	414 00		414 00							4 00	100	1	7 00			
9 00	423 00	120	543 00					40		3 00	100	1	7 00			100
6 00	234 00		234 00					35		2 00						150
15 00	615 00		615 00							8 75	100	1	6 00			250
12 00	420 00		420 00							4 00						50
8 00	392 00		392 00							4 00						60
5 00	245 00		245 00					*		*						
9 00	405 00		405 00					50		3 50						250
4 75	47 50		47 50					*		*						
8 00	384 00		384 00					25		4 00	100	1	7 00			100
10 00	490 00		490 00	490					8 00							200
10 50	504 00		504 00	404	\$3000		\$100									4000
9 00	441 00		441 00	441					9 00							300
9 00	397 00		397 00	253	400	\$160	184				2000	1	10 00			600
12 00	420 00		420 00	470					11 00					26		1200
12 00	598 00		598 00						8 00		2000					600
10 50	514 50	45	559 50	604					8 00			1	4 00			800

* Lives at home and gives wages to parents.

* Lives at home and pays no stated amount for board.

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Finisher	35	U. S.	U. S.	m	3	3	1		4	52		
Trimmer	25	"	"	m	1	1			2	49	3	sick and laid off
	27	"	"	m	2	2			4	49	3	"
Crater	37	"	"	m	2	2	2		4	49	3	"
Pattern maker	52	"	"	m	2	2			4	52		
"	33	"	"	m	1	1			2	51	1	laid off
"	25	"	England	m	1	1			2	51	1	holidays
"	30	"	U. S.	m	2	2	1		3	50	2	sick and laid off
"	39	"	"	m	2	2			4	43	9	accident & sickness
"	32	"	"	m	2	2	2		4	39	13	sick
Laborer	42	"	"	m	2	1			3	44	8	sick and laid off
Shipping clerk	34	Canada	"	m	1	1			2	52		
Wood worker	35	Holland	Holland	m	1	1	1		3	51	1	vacation
Cabinet maker	51	U. S.	U. S.	m	1	1	1		3	52	2	sick and laid off
Carver	38	Germany	Germany	m	1	1	1		3	48	4	"
"	35	U. S.	Ireland	m	3	3			6	43	9	laid off
Cabinet maker	49	Switz.	Switz.	m	1	1			2	50	2	"
"	28	Holland	Holland	m	1	1			2	50	2	sick and laid off
"	50	U. S.	England	m	3	3	2		6	48	4	"
"	35	"	U. S.	m	3	3	3		9	52		
"	33	Germany	Germany	m	1	1			2	41	11	accident, sick & laid off
"	39	Canada	France	m	6	6	3		9	49	3	sick and laid off
"	43	"	Canada	m	1	1			2	49	3	laid off
Wood worker	39	U. S.	U. S.	m	1	1			2	43	9	sick
Cabinet maker	35	Canada	Germany	m	3	3	2		5	50	2	laid off
"	27	"	Canada	m	1	1			2	43	9	sick and laid off
"	32	U. S.	U. S.	m	2	2	2		4	50	2	laid off
"	35	England	England	m	1	1	1		3	49	3	laid off and vacation
"	27	Canada	Canada	m	1	1			2	52		
Machinist	32	U. S.	U. S.	m	1	1			2	48	4	laid off and vacation
"	37	Ireland	Ireland	m	1	1			2	45	7	sick
Engineer	53	U. S.	U. S.	m	1	1			2	51	1	holidays
Wood worker	61	"	"	m	3	3	1	1	5	48	4	sick and accident
"	27	"	"	m	1	1			2	51		
"	36	"	"	m	2	2	1		3	50	2	laid off
"	32	"	"	m	3	3	1		4	51	1	sick
"	21	"	"	m	1	1			2	50	2	laid off
"	35	"	"	m	2	2	2		4	49	3	vacation
Cabinet maker	52	"	"	m	2	2			4	49	3	out of work
Wood worker	47	"	Scotland	m	2	2	1	1	4	44	8	vacation
Cabinet maker	40	Canada	U. S.	m	1	1			2	51	1	laid off
Wood worker	26	U. S.	"	m	1	1			2	48	4	"
"	27	"	"	m	1	1			2	39	13	sick and laid off
"	35	"	Germany	m	1	1			2	39	13	accident and laid off
"	31	"	U. S.	m	2	2		1	4	48	4	laid off
"	31	"	"	m	1	1			2	52		
Shipping clerk	29	"	"	m	2	2			4	48	4	vacation
Wood worker	55	"	"	m	2	2	1		3	52		
"	43	"	"	m	2	2			4	51	1	laid off
Laborer	54	"	"	m	4	2	1		7	44	8	sick
"	35	"	"	m	2	2	2		4	51	1	out of work
"	28	"	Ireland	m	1	1			2	39	13	laid off
"	40	"	U. S.	m	1	1	1		3	48	4	sick and laid off

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$702 00		\$702 00	\$702					\$3 00			1	\$5 00			\$300
10 50	514 50		514 50	414	\$1100			\$100								1000
9 00	441 00		441 00	441					7 00		\$2000					600
10 50	514 50		514 50	514					7 00							300
14 00	728 00	\$400	1128 00	728	8000		\$400									5800
13 50	688 50		688 50	588	1800	\$300	102				2000					2000
9 00	456 00	15	474 00	474					10 00							500
13 50	688 50		688 50	588	1200	750	310									700
11 25	483 75		483 75	483	1600	300	48									2000
15 00	585 00		585 00	440	1700	1400	25	120			2000					800
9 00	396 00	48	444 00	444					6 00							125
13 50	702 00		702 00	502	600		200							10		1000
18 00	918 00		918 00	718				200	10 00		2000			23		2500
12 00	600 00		600 00	500				100	6 00							300
12 00	576 00		576 00	476				100	6 00		550	1	4 00	35		600
15 00	645 00		645 00	445				200	7 00							300
12 00	600 00		600 00	400	600			200			500	1	4 00	19	\$30	1000
13 50	688 50		688 50	588					8 60					18		400
12 00	576 00		576 00	501				75	10 00		2000					1000
11 50	598 00		598 00	598					8 00							200
12 00	492 00		492 00	492					6 00					1	50	120
13 50	661 50		661 50	625	900	650	86							25		450
12 00	588 00		588 00	588				50	10 00			1	2 00	2	200	300
13 50	580 50	150	730 50	585	2500	500	135				2000					2500
12 00	600 00		600 00	600					6 00					1		150
12 00	516 00		516 00	516					9 00					2	30	50
12 00	600 00	30	630 00	530				100	7 00		2500					800
12 00	588 00		588 00	488				100	10 00							
13 50	702 00		702 00	627				75	9 00		30	1	3 00	4		250
12 00	576 00	425	1001 00	751	4000		50	200			2000	1		2	175	8000
10 50	472 50		472 50	304	1100	600	68	100			1000					1000
13 50	688 50		688 50	504	2000	1800	180				2000					600
12 00	576 00		576 00	501	1200		75									1500
10 50	546 00	75	621 00	421	1200	600	200				500	1	5 00			900
10 50	525 00		525 00	525					9 00		2000					300
12 00	612 00		612 00	572	1500	450	40				2000					1300
9 00	450 00		450 00	325				125	6 00							
14 00	696 00		696 00	496				200	10 00		2000					900
13 00	637 00		637 00	402	2500	700	235				2000					3000
13 50	594 00		594 00	439	2500	800	156									3500
12 00	612 00		612 00	612					8 50					9	75	250
10 50	504 00		504 00	368	1500		6	100								1700
8 50	331 50		331 50	251	900	750	110									350
9 00	351 00		351 00	351					8 00							150
10 50	504 00		504 00	432	600	150	22	50								700
9 00	468 00		468 00	468					8 00							800
8 00	394 00		394 00	334				50	7 00		2000					500
12 50	650 00		650 00	496	2000	200	164				3300	1	5 00			2500
12 15	619 65		619 65	505	2000		64	50			6000					2800
9 00	396 00		396 00	276	550	175	120									500
12 00	612 00		612 00	512				100	5 00							150
15 00	585 00		585 00	435			150		7 00							300
9 00	432 00		432 00	372	350	125	60									300

TABLE No. 2.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Wood worker	33	U. S.	U. S.	m	—	—	—	—	1	35	17	sickness and laid off
Teamster and team	21	"	"	m	—	—	—	—	1	50	2	sick and vacation
Wood worker	33	"	"	m	—	—	—	—	1	44	2	out of work
"	28	"	"	m	2	2	2	—	3	46	6	laid off
"	64	"	"	m	—	—	—	—	1	46	6	"
"	64	"	"	wt	—	—	—	—	—	44	8	"
Cabinet maker	53	"	"	wt	1	1	—	—	1	44	4	"
Wood worker	24	"	"	s	—	—	—	2	2	43	9	sick and laid off
Finisher	35	"	France	wt	1	1	1	—	1	51	1	sick
"	25	"	Ireland	s	—	—	—	—	—	13	39	out of work
"	18	"	"	s	—	—	—	—	—	48	4	laid off and vacation
Painter	20	"	Germany	s	—	—	—	—	—	43	9	sick
Carver	25	Sweden	Sweden	s	—	—	—	—	—	43	9	laid off
Cabinet maker	23	Canada	Canada	s	—	—	—	—	—	39	13	sick
"	31	"	"	s	—	—	—	—	—	13	—	not in U. S.
Laborer	14	U. S.	U. S.	s	—	—	—	—	—	37	15	sick and no work
Wood worker	14	Canada	Canada	s	—	—	—	—	—	49	8	sick and laid off
Polisher	19	U. S.	U. S.	s	—	—	—	—	—	50	2	laid off and vacation
Cabinet maker	21	Canada	Canada	s	—	—	—	—	—	49	3	laid off
"	20	U. S.	U. S.	s	—	—	—	—	—	51	1	sick
"	23	Russia	Russia	s	—	—	—	—	—	41	11	accident and laid off
"	34	U. S.	England	s	—	—	—	—	—	47	5	vacation
Laborer	18	"	U. S.	s	—	—	—	—	—	50	2	laid off
Wood worker	15	"	"	s	—	—	—	—	—	52	—	"
"	33	"	"	s	—	—	—	2	2	52	—	"
"	21	"	"	s	—	—	—	—	1	41	11	laid off
Crater	20	"	"	s	—	—	—	—	—	39	13	school
THE MICHIGAN FOUNDRY CO.												
Teamster and team	34	U. S.	"	m	1	1	—	1	3	52	—	—
Carpenter	34	"	"	m	3	3	2	1	5	52	—	—
Laborer	23	Germany	Germany	m	2	2	—	—	3	52	—	—
"	43	Canada	France	m	—	—	—	—	1	47	5	sick and accident
"	23	U. S.	U. S.	m	—	—	—	—	1	43	9	laid off
Molder	29	"	Germany	m	1	1	—	—	2	50	2	"
"	23	Canada	Canada	m	1	1	—	—	2	49	3	sick and laid off
"	33	U. S.	Germany	m	2	2	—	—	3	47	5	"
"	30	"	England	m	1	1	—	—	2	48	4	"
"	31	"	U. S.	m	—	—	—	—	1	52	—	—
Laborer	23	"	Germany	m	1	1	—	—	2	46	6	out of work
Molder	30	Scotland	Scotland	m	2	2	—	—	3	52	—	—
"	36	U. S.	U. S.	m	1	1	—	—	2	22	30	vacation
"	28	"	"	m	2	2	—	—	3	50	2	laid off
Laborer	32	"	"	m	3	3	1	—	4	52	—	—
Molder	41	"	"	m	6	6	4	—	7	45	7	no work and laid off
"	26	"	"	m	3	3	—	1	5	51	1	sick
"	43	"	Germany	m	7	7	3	—	8	50	2	laid off
"	40	"	France	m	—	—	—	—	1	49	3	"
"	55	"	U. S.	m	—	—	—	—	1	26	26	out of work
"	82	"	"	m	—	—	—	—	1	18	39	work for self
"	23	"	"	m	3	3	—	2	6	47	5	laid off and vacation
"	43	"	Ireland	m	1	1	—	—	2	49	3	laid off
"	36	"	"	m	2	2	—	—	3	50	2	"

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
38 00	\$315 00		\$315 00	\$285				\$30	\$6 00		\$2000					\$800
10 50	528 00		528 00	475				50	7 50							500
12 50	528 00		528 00	408	\$300	\$150	\$125									1000
10 50	488 00		488 00	358	500	500		125			2000					200
10 50	488 00		433 00	423				50	8 00							500
10 50	462 00		462 00	462	2500	600					500	2	\$12 00			2500
11 50	552 00		552 00	782					6 00		1250					200
9 00	387 00		387 00	349	600	50	88									850
15 00	768 00	\$80	845 00							\$6 00	2000					2000
15 00	198 00		198 00					30		2 50						125
4 00	192 00		192 00							3 00						
6 00	258 00		258 00							2 50						100
9 00	387 00		387 00							4 00					\$35	75
10 50	406 50		406 50							3 00				1	4	500
12 00	156 00		156 00							3 00				1/4	1500	1500
8 00	111 00		111 00							†						
8 00	147 00		147 00							2 50						100
4 50	225 00		225 00						3 25	1	4 00				50	
10 50	514 50		514 50					100	3 50	30	1	3 00		1	100	250
9 00	459 00		459 00					100	3 25							850
9 00	369 00		369 00					85		3 50					4	120
12 00	564 00		564 00							4 00						25
8 00	150 00		150 00							2 50						150
9 00	468 00		468 00							†						
10 50	546 00		546 00	546					†							
10 50	480 50		430 50							4 00						500
9 00	351 00		351 00					50		3 50						150
16 00	832 00	60	892 00	492				400	7 00							1200
10 50	546 00		546 00	546					8 00							75
9 00	468 00		468 00	268	800	650	200									400
7 50	352 50		352 50	352					5 00						37	50
9 00	387 00		387 00	387					5 00							200
15 00	750 00		750 00	750					6 00		100	1	6 00			100
13 50	661 50		661 50	661					10 00		100	1	6 00		150	350
15 00	705 00		705 00	605				100	8 00		2100	1	6 00			800
13 50	648 00		648 00	648					9 00		1125	2	13 00			600
13 50	702 00		702 00	702					6 00		2100	1	6 00			400
7 50	345 00		345 00	345					4 00							600
13 50	702 00		702 00	502	900	200	100	100			100	1	6 00	10		1000
12 00	264 00		264 00	239				25	5 00		100	1	6 00			400
12 00	600 00		600 00	600					8 00		2100	1	6 00			500
10 00	520 00		520 00						5 50		2000					400
12 50	607 50		607 50	560	1200	100	47				2100	1	6 00			1500
9 00	459 00	65	524 00	449	800	350	75									600
18 00	900 00		900 00	1500	900	100					100	1	6 00			900
13 50	661 50		661 50	511	1800	800	150				100	1	6 00			1200
13 50	351 00		351 00	451					8 00		100	1	6 00			
12 00	156 00	500	656 00	631				25	6 00		100	1	6 00			500
15 00	705 00		705 00	550	400	100		100			100	1	6 00			450
15 00	785 00		785 00	715				20	6 00		100	1	6 00			150
13 50	675 00		675 00	355	1000	550	70	250			100	1	6 00			700

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 2.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	27	Switz.	Switz.	m	1	1			2	49	2	sick and laid off
"	32	U. S.	Ireland	m	1	1			1	49	2	laid off
"	33	Ireland	"	m	1	1		1	4	49	2	"
"	27	Germany	Germany	m	1	1			2	50	2	"
"	27	U. S.	"	m	1	1			2	48	4	laid off and vacation
"	27	"	U. S.	m	2	2	1		4	48	4	"
"	32	"	"	m	2	2			1	38	19	sick and no work
"	45	Canada	Canada	m	2	2	3		5	48	4	sick and laid off
Laborer	38	U. S.	U. S.	m	2	2			3	52	2	"
"	28	"	Germany	m	1	1			1	50	2	laid off
Molder	32	"	U. S.	m	1	1			2	48	4	accident and laid off
"	25	"	"	m	1	1	1		2	48	4	laid off
"	42	England	England	m	1	1			1	50	2	"
"	41	"	"	m	2	1			2	52	2	"
"	30	U. S.	Ireland	m	1	1			1	49	3	laid off
"	21	"	U. S.	m	2	2	1	2	5	48	9	sick and vacation
Laborer	30	Canada	Canada	m	1	1			2	52	2	"
Grinder	23	U. S.	"	m	1	1			2	49	3	sick and laid off
Engineer	45	Canada	England	m	2	2	1		4	52	2	"
Laborer	28	U. S.	Germany	m	2	2			3	50	2	laid off
Melter	48	Germany	"	m	8	8	1		9	48	9	"
Laborer	20	U. S.	U. S.	s						13	39	school
Core maker	17	"	England	s						48	4	laid off and vacation
"	18	"	U. S.	s				1	1	38	14	sick and laid off
"	37	"	"	s				1	1	49	4	laid off
Laborer	18	"	Ireland	s						46	6	accident and laid off
"	35	England	"	s				1	1	48	4	sick and laid off
Molder	23	U. S.	"	s						48	4	laid off
"	22	"	U. S.	s						44	8	sick and laid off
"	36	"	Ireland	s				1	1	44	8	"
"	25	"	U. S.	s						39	13	out of work
"	26	"	"	s						25	17	"
"	28	"	Ireland	s						49	3	sick and laid off
"	23	"	"	s						25	17	out of work
"	23	"	U. S.	s				1	1	26	26	"
Core maker	17	"	"	s						51	1	laid off
Molder	22	"	Holland	s						45	7	accident and laid off
"	29	Switz.	Switz.	s						49	3	laid off and vacation
"	24	U. S.	Ireland	s						35	17	sick
"	26	"	"	s						26	26	out of work
"	26	"	U. S.	s						82	20	sick and laid off
"	19	"	"	s						48	4	accident and laid off
"	19	"	Ireland	s						35	17	out of work
"	24	"	Holland	s						49	2	laid off
"	18	"	U. S.	s						49	8	"
Laborer	21	"	England	s						43	9	at home
Molder	21	"	U. S.	s						48	4	vacation and laid off
BATTLE CREEK MACHINERY CO.												
Pattern maker	25	U. S.	"	s						48	4	sick and vacation
Laborer	58	"	"	m					1	51	1	sick
Core maker	30	"	"	s						50	2	sick and laid off
"	19	"	Germany	s						48	4	laid off and vacation

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$661 50		\$661 50	\$375	\$1100	\$300	\$282				\$700	2	\$10 00	8		\$1500
15 00	735 00		735 00	765 00							2100	1	6 00			1400
15 00	735 00		735 00	535	1300	400	200				100	1	6 00	23		1500
15 00	750 00		750 00	750 00							100	1	6 00	24		250
15 00	720 00		720 00	620				100	8 25		100	1	6 00			450
15 00	720 00		720 00	457	1000	300	263				100	1	6 00			1050
13 50	445 50		445 50	445					7 50		100	1	6 00			150
15 00	720 00		720 00	720					12 00		2100	1	6 00	10	\$800	600
8 00	416 00		416 00	354	500	300	62									450
7 50	375 00		375 00	309	700	250	66				2000					700
12 00	576 00		576 00	376	1000	250	200				2100	1	6 00			1000
12 00	576 00		576 00	376				200	8 00		100	1	6 00			400
16 00	900 00		900 00	240	1100	940	160	400			2100	1	6 00	41		500
15 00	790 00	150	940 00	630	1100	700	800				100	1	6 00	20		1500
13 50	661 50		661 50	661					6 00		100	1	6 00			500
12 00	541 80		541 80	461				80	10 00		100	1	6 00			300
10 50	546 00		546 00	546					7 00		2000					300
9 00	441 00		441 00	441					5 50							75
12 00	624 00		624 00	624					8 00					19		100
7 50	375 00		375 00	300				75	7 00		2000					200
13 50	580 50		580 50	580					7 00					24		
3 00	39 00		156 00													100
4 50	216 00		216 00													
7 50	285 00		285 00	285					7 50							
13 50	648 00		648 00							\$3 50		1	7 00			
7 50	345 00		345 00						8 00							
7 50	360 00		360 00					100	3 50					7	5	500
15 00	720 00		720 00						4 00		100	1	6 00			45
12 00	528 00		528 00					75	3 50		100	1	6 00			100
13 50	594 00		594 00					100	8 25		100	1	6 00			150
13 50	526 50		526 50						8 50		100	1	6 00			50
12 00	420 00		420 00						4 00		100	1	6 00			30
13 50	661 50		661 50					100	8 50		100	1	6 00			200
15 00	525 00		525 00						8 50		100	1	6 00			100
6 00	156 00		156 00	156					8 50		100	1	6 00			100
7 50	362 50		362 50						3 00							
13 50	607 50		607 50					50	3 50		100	1	6 00			50
12 00	588 00		588 00					200	8 50		100	1	6 00	11		1300
18 50	472 50		472 50					125	3 50		100	1	6 00			200
18 00	468 00		468 00						4 00		100	1	6 00			
15 00	480 00		480 00						3 00		100	1	6 00			150
7 50	360 00		360 00					100	8 00							150
7 50	262 50		262 50						8 50							100
12 00	588 00		588 00						3 50		100	1	6 00			
6 00	294 00		294 00					20	8 00							
7 50	322 50		322 50						8 00							65
8 00	364 00		364 00					50	2 00							75
10 50	504 00		504 00					200	4 00		4500					800
10 50	535 50		535 50	485				50	8 00							150
6 00	300 00		300 00								2 00					75
5 25	252 00		252 00								3 00					65

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Core maker	21	U. S.	U. S.	s	—	—	—	—	—	51	1	sick
Molder	17	"	"	s	—	—	—	—	—	50	2	sick and accident
"	26	"	"	s	—	—	—	—	—	32	20	sick
"	24	"	Ireland	s	—	—	—	—	—	46	6	laid off
"	25	Canada	"	s	—	—	—	—	—	32	—	not in this country
"	23	U. S.	Germany	s	—	—	—	1	1	46	6	sick and no work
"	34	"	Ireland	s	—	—	—	—	—	32	20	sick
Machinist	26	"	U. S.	s	—	—	—	2	2	47	5	laid off
"	22	"	"	s	—	—	—	—	—	49	4	sick and laid off
"	22	"	"	s	—	—	—	—	—	41	11	out of work
"	23	Germany	Germany	s	—	—	—	—	—	48	4	accident
"	19	U. S.	U. S.	s	—	—	—	—	—	49	3	sick and laid off
"	18	"	"	s	—	—	—	—	—	49	6	vacation
"	18	"	"	s	—	—	—	—	—	52	—	—
"	15	"	"	s	—	—	—	—	—	10	42	school
"	22	England	England	s	—	—	—	—	—	44	8	laid off
Molder	33	Canada	"	m	1	1	—	—	2	50	2	sick and holidays
"	25	England	"	m	2	2	—	—	3	51	1	laid off
Painter	50	U. S.	"	m	2	2	—	—	3	49	3	sick and laid off
"	49	"	U. S.	m	2	2	—	—	3	36	26	"
"	37	"	"	m	2	2	2	—	5	51	1	vacation
Wood worker	28	"	"	w'r	—	—	—	—	—	41	11	sick and no work
"	42	"	"	m	1	1	—	—	2	26	26	sick & work for self
"	52	"	"	m	—	—	—	1	2	39	13	out of work
"	35	"	"	m	—	—	—	—	1	50	2	sick and vacation
Laborer	57	"	"	m	2	2	1	—	3	48	4	sick and laid off
Engineer	43	"	"	m	—	—	—	—	1	51	1	vacation
Laborer	43	"	"	m	7	7	3	1	9	22	30	sick
Blacksmith	27	"	Germany	m	—	—	—	—	1	35	17	no work
"	35	England	England	m	3	3	—	—	4	51	1	vacation
Machinist	38	U. S.	U. S.	m	2	2	2	1	4	49	3	sick
"	29	"	"	m	1	1	—	—	2	50	2	sick and laid off
"	27	"	"	m	1	1	—	—	2	49	3	sick and no work
"	32	"	"	m	3	3	2	—	4	46	6	sick
"	23	"	England	m	—	—	—	1	2	49	3	laid off
Iron worker	46	"	U. S.	m	—	—	—	—	1	26	26	out of work
Machinist	38	"	"	m	—	—	—	—	1	42	10	sick
"	48	"	"	m	2	2	1	1	4	45	7	sick and no work
"	32	"	"	m	1	1	—	—	2	51	1	sick
"	35	"	"	m	2	2	1	—	3	43	9	sickness
Brass finisher	24	Canada	England	m	—	—	—	—	1	42	10	laid off
Machinist	39	U. S.	U. S.	m	5	5	3	—	6	52	—	—
"	36	"	"	m	3	3	2	1	5	50	2	laid off and vacation
"	27	"	"	m	1	1	—	—	2	50	2	"
"	50	"	"	m	—	—	—	—	1	50	2	sick and laid off
"	38	Canada	Scotland	m	1	1	—	—	2	46	6	laid off and vacation
"	39	U. S.	U. S.	m	1	1	1	—	2	43	9	sick and laid off
"	35	"	"	m	1	1	1	1	3	52	—	—
"	61	Scotland	Scotland	m	—	—	—	—	1	38	13	laid off
JOHN BRENNAN & Co.												
Laborer	45	Germany	Germany	m	4	4	2	—	5	50	2	accident
Boiler maker	40	England	England	m	4	4	—	—	5	47	5	sick
Engineer	26	Germany	Germany	m	1	1	—	—	2	51	1	"

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
38 00	\$306 00		\$306 00							\$2 50	\$25	1	\$7 00			\$35
13 50	300 00		300 00					\$8		2 00	25	1	7 00			50
13 50	432 00		432 00					100		3 50	2100	1	6 00			50
13 50	414 00		414 00					40		3 75	125	2	13 00			80
13 50	432 00		432 00							3 50	165	3	16 00	7mo		
13 50	621 00		621 00					5		3 00	125	2	18 00			50
15 00	490 00		490 00					10		4 00						75
13 50	634 50		634 50							4 00	25	2	10 00			250
11 00	528 00		528 00					75		†	25	1	7 00			300
4 80	196 80		196 80							3 00						50
10 50	504 00		504 00							4 00		1	8 00	14		150
7 50	367 50		367 50							4 00						100
6 75	380 75		380 75					104		free						200
9 00	468 00		468 00							†						100
8 00	30 00	\$35	65 00							†						500
10 50	462 00		462 00							3 50	1000	1	3 00	19		300
13 50	675 00		675 00	\$575	\$300		\$60	40		1100	1100	1	6 00	30		1000
13 50	688 50		688 50	588				100	\$8 00	125	2	13 00				250
15 00	735 00		735 00	567	1400	\$100	108	60		25	1	7 00			\$50	2500
9 00	234 00		234 00	294					6 00							150
13 50	688 50		688 50	435	1000	250	83	170		8 50	1025	1	7 00			1200
7 50	307 50		307 50													300
8 00	208 00	175	383 00	275	1500		33	75								2400
13 50	526 50		526 50	526					10 00		1000					500
12 00	600 00		600 00	500				100	8 00		2025	1	7 00			1500
9 00	432 00	96	528 00	528	1200						25	1	7 00			1600
13 50	688 50		688 50	484	3500	1125	100	104		2025	1	7 00				2300
9 00	198 00		198 00	548					8 00							300
12 00	420 00		420 00	420					6 00							875
15 00	765 00		765 00	641	1600		20	104			4525	1	7 00	18		2000
13 50	661 50	180	841 50	641	2000		100	100			1000	1	3 00			6000
13 50	675 00		675 00	575				100	9 00		25	2	10 00			700
12 00	588 00		588 00	588					8 00		25	2	10 00			500
13 50	621 00		621 00	621					8 00			1	3 00			400
12 00	588 00		588 00	588					7 00		25	2	10 00			300
10 50	273 00		273 00	273					8 00							100
13 50	567 00		567 00	567					6 00			1	3 00			150
10 50	472 50		472 50	572					13 00		2000					200
13 50	688 50	250	938 50	633				300	10 00		25	2	10 00			450
13 50	580 50	100	680 50	630				50	10 00		2025	2	10 00			800
15 00	630 00		630 00	580				50	6 00					10		100
19 23	1000 00	75	1075 00	725	1500			350			4000					3000
13 50	675 00	200	875 00	875	1200	150					2000					1300
13 50	675 00	55	730 00	655	2000		25	50			2000					5500
13 50	675 00	550	1225 00	1125				100	21 00		1000	1	7 00			3000
13 50	621 00		621 00	571				50	12 00		25	2	10 00	11		700
13 50	580 50		580 50	497	1800	800					25	2	10 00			2000
13 50	702 00		702 00	581	1800	300	121				2000	2	10 00			2500
10 50	409 50		409 50	309				100	6 00					10		200
8 00	400 00		400 00	400	1000									17		1200
15 00	705 00		705 00	605	650	550	100							8	10	300
9 00	459 00		459 00	459					4 50					21		60

† Lives at home and pays no stated amount for board.

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Iron worker	34	U. S.	U. S.	m	1	1			2	49	3	accident and laid off
Boiler maker	35	"	Germany	m				2	3	46	6	sick
"	23	"	"	m	1	1			1	51	1	holidays
Laborer	45	England	England	m	7	4	2	1	6	44	8	sick and laid off
"	39	U. S.	Germany	m	5	5	4		6	50	2	vacation
Iron worker	31	"	"	m	1	1	1		2	49	3	sick
Blacksmith	60	Germany	"	m					1	45	4	
Laborer	44	"	"	m	4	4	3		5	48	4	laid off and no work
Boiler maker	41	"	"	m	5	5	3		6	52	4	
Laborer	44	Ireland	Ireland	m	4	4	2		5	45	4	sick
Boiler maker	28	U. S.	U. S.	m					1	42	10	out of work
Laborer	29	Germany	Germany	m	4	4			5	26	25	"
Iron worker	31	"	"	m	1	1			2	43	9	sick
Blacksmith	24	"	"	m					1	48	4	vacation
"	29	Switz.	Switz.	m	1	1			2	50	2	"
Boiler maker	48	Germany	Germany	m	4	4	2		5	51	1	holidays
Laborer	30	Ireland	Ireland	m					1	47	5	sick and holidays
"	33	Germany	Germany	m	1	1			2	50	2	vacation
Iron worker	45	"	"	m	3	3	1		4	44	8	sick and no work
Blacksmith	37	Holland	Holland	m	2	2	1		3	51	1	holidays
"	35	Germany	Germany	s				2	2	51	1	laid off
"	25	Ireland	Ireland	s				1	1	50	2	"
Laborer	18	U. S.	Germany	s						48	4	sick
Blacksmith	22	"	"	s						39	13	out of work
Laborer	24	"	"	s						49	3	"
Blacksmith	25	Germany	"	s						35	17	sick
Laborer	14	U. S.	"	s						3	49	school
"	15	"	"	s						48	4	sick and accident
"	24	"	U. S.	s						39	13	out of work and sick
"	14	Canada	England	s						48	4	out of work
Laborer	14	U. S.	Ireland	s						51	1	sick
Boiler maker	33	England	England	s						48	4	sick and laid off
Laborer	17	U. S.	U. S.	s						48	4	sick
"	16	"	"	s						48	4	out of work
Boiler maker	23	Canada	Scotland	s						39	13	"
"	29	U. S.	Ireland	s			3		3	48	4	sick
Laborer	24	"	U. S.	s						35	17	out of work
Iron worker	23	Germany	Germany	s						51	1	vacation
Boiler maker	19	Canada	Ireland	s						47	5	accident and vacation
UNION MANUFACTURING CO.												
Machinist	34	U. S.	U. S.	m	3	3			4	52		
Molder	30	Canada	Canada	m	3	3	3		4	52		
Laborer	53	Ireland	Ireland	m	3				1	40	12	sick and laid off
Molder	32	U. S.	U. S.	m	1	1			2	49	3	laid off
Blacksmith	59	"	"	m	1	1	1		2	39	13	out of work
Machinist	40	"	England	m					1	44	8	sick
"	39	"	U. S.	m	4	4	3		5	52		
"	31	"	Germany	m	1	1			2	48	4	vacation
"	25	"	England	m	1	1			2	44	8	sick and laid off
"	40	"	U. S.	m	1	1	1	1	3	47	5	"
Wood worker	64	"	France	m	1	1			2	39	13	vacation
Draughtsman	27	"	U. S.	wr						35	17	"
Machinist	20	"	Ireland	s						51	1	laid off

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt. %.	Amount paid on home during year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$367 50		\$367 50	\$367					\$6 00							\$500
9 00	414 00		414 00	214	\$800			\$200								1000
13 50	688 50		688 50	688				6 50								200
15 00	660 00		660 00	510				150	no ans.							250
7 50	375 00		375 00	375	1000						\$4000				\$150	1400
7 50	367 50	\$300	667 50	367				800	8 00							800
7 50	360 00		360 00	310				50	8 00							\$500
7 50	360 00		360 00	260				100	8 00							2000
12 00	324 00		324 00	\$74	750	\$500	\$250				600	1	\$4 00			600
7 50	360 00		360 00	369	1000	300	21				1050	1	5 00		12	900
12 00	504 00		504 00	304				200	5 00							500
7 50	195 00		195 00	185					6 00							
9 00	367 00		367 00	267	700	100		100							1	800
10 50	504 00		504 00	454	700	570	50								7	250
13 50	675 00		675 00	600	515	265		25			600	1	4 00		8	600
15 00	765 00		765 00	515	1500		50	200							24	2000
8 00	376 00		376 00	376					6 00						6	200
7 50	375 00		375 00	295	800	450	85								4	500
9 00	396 00		396 00	396	1000	300	14								20	1000
12 00	612 00		612 00	412	1200			300							15	2000
9 00	459 00		459 00	459					7 00						34	
10 00	500 00		500 00	350				150	6 00						18	200
7 00	336 00		336 00							†						
7 50	292 50		292 50					50		\$3 50						150
7 50	367 50		367 50					150		3 00						300
8 00	280 00		280 00							3 00	600	1	4 00		4	200
8 00	9 00		9 00							*						
4 50	216 00		216 00							*						
7 50	262 50		262 50					70		3 50						300
2 70	129 60		129 60							*						
4 50	229 50		229 50							*						
13 50	649 00		649 00					200		3 00					9	50
4 50	216 00		216 00					100		†						150
7 50	360 00		360 00							2 50						2000
15 00	585 00		585 00							3 50					2	200
18 00	864 00		864 00							5 00						
7 50	262 50		262 50							3 50						
9 00	459 00		459 00							3 50					18	400
13 20	573 40		573 40					40		3 50					11	100
13 00	624 00		624 00	524				100	9 00							300
13 50	702 00	105	807 00	807	1050	200					100	1	6 00		9	2000
9 00	360 00	624	944 00	893	800	200	91								30	1000
16 50	906 50		906 50	808					8 00		2100	1	6 00			200
12 00	468 00		468 00	311	1800	600	42	115								1500
15 00	660 00		660 00	460				200	10 00		1000					1000
15 00	780 00		780 00	780					8 00		2000					
15 00	720 00		720 00	545	1500	600	75	100			600	1	4 00			2000
12 00	528 00		528 00	528					7 00							200
13 50	634 50		634 50	559				75	10 00		2000					1800
12 00	468 00		468 00	363	1000			100								4000
13 50	472 50	1000	1472 50							4 50	2000					3500
4 50	229 50		229 50					52		3 00						150

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
E. CLAPP.												
Blacksmith.....	59	Canada	Ireland	m	3	2	1		3	50	2	sick
".....	21	U. S.	"	m						48	4	vacation & accident
Wood worker.....	68	"	U. S.	m					1	38	18	sick
Painter.....	32	"	"	m					1	48	4	out of work

TABLE No. 2.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$600 00		\$600 00	\$525	\$1200		\$75									\$1500
7 50	380 00		380 00					\$50		\$3 50						50
00 00	851 00		851 00	351					\$10 00							
12 00	578 00	\$250	828 00	628				200	10 00							

BATTLE CREEK.

Seven hundred and ninety-three employes were canvassed: E. Clapp (manufacturer of carriages and wagons), 4; Union Manufacturing Co. (manufacturers of printing presses and general jobbing machinery), 13; John Brennan & Co. (manufacturers of boilers), 42; Battle Creek Machinery Co. (manufacturers of wood working machines, drag saws, horse powers and steam pumps), 53; Michigan Foundry Co. (manufacturers of miscellaneous castings), 71; Union School Furniture Co. (manufacturers of school, bank and court house furniture and fixtures and opera chairs), 87; Advance Thresher Co. (manufacturers of threshing machines), 245; Nichols & Shepard Co. (manufacturers of threshing machines), 278.

Nationality: Americans, 652; Canadians, 45; Germans, 27; Englishmen, 25; Irishmen, 22; Scotchmen, 8; Hollanders, 5; Swiss, 5; Swedes, 2; Russian, 1; Mexican, 1. 82+per cent are Americans and 18-per cent foreigners. Of the foreigners, 32-per cent are Canadians; 19+per cent Germans; 18-per cent Englishmen; 16-per cent Irishmen; 6-per cent Scotchmen; 4-per cent Hollanders; 4-per cent Swiss; 1+per cent Swedes; and Mexican and Russian less than one per cent. Parentage of those born in the United States: American, 521; German, 38; Holland, 2; Irish, 49; Canadian, 7; Scotch, 7; French, 3; English, 24; Russian, 1. 80-per cent have American and 20+per cent foreign parents. 564 employes are married, 204 single and 25 widowers. 71+per cent are married, 26-per cent single and 3+per cent widowers. There are employed five boys 15 years and six 14 years of age. None under 14. 187 support self only; 21 support others than self by boarding, and 585 support families: Americans, 473; Canadians, 33; Englishmen, 19; Mexican, 1; Hollanders, 5; Swede, 1; Swiss, 4; Scotchmen, 6; Germans, 23; Irishmen, 20. In 585 families there are 952 children, of whom 887 are supported. 145 married men have no children, of which 118 or 81+per cent are Americans; 9 are Englishmen; 8 Canadians; 2 Irishmen; 4 Germans; 1 Swiss; 1 Scotchman; 1 Hollander; 1 Mexican. Of the children supported 269 are under 5 years of age; 599 are 5 and under 20, and 19 are over 20. 436 attend school, which is 73-per cent of school age. 392 or 90-per cent attend the public schools, 37 parochial, 4 select and 3 commercial. Number of persons supported in families, 1,542; by boarding, 27. 89 employes support 119 persons besides wife and children. Total number of weeks worked during the year, 36,552; average, 46+. 685 men or 87-per cent lost 4,608 weeks, or 88 years and 32 weeks. Cause of lost time: Accident, 7; sickness, 77; vacation, 43; accident and laid off, 26; holidays, 12; laid off and no work, 7; no work, 45; sickness and holidays, 3; sickness and no work, 15; laid off, 245; at school, 6; sickness and accident, 6; sickness and laid off, 132; accident and vacation, 2; laid off and vacation, 34; sickness and vacation, 10; sickness, accident and laid off, 1; shut down, 3; accident and no work, 1; holidays and laid off, 4; accident and holidays, 1; worked for self, 4; no work and vacation, 1. Total annual earnings, \$393,759.09; average, \$496.54. Total income from other resources, \$18,179, as follows: Family earnings, \$726, boarding, \$2,068; pensions, \$1,278; interest, \$2,320; rent, \$6,328; other sources, \$5,439. Total annual earnings of Americans, \$321,995.34; average, \$493.85; Canadians, \$22,416.50; average, \$498.14; Englishmen, \$13,626.20; average, \$545.04; Mexican, \$624; average, \$624; Hollanders, \$3,130.50; average, \$626.10; Swedes, \$857; average, \$428.50; Russians, \$369; average, \$369; Swiss, \$2,941; average, \$588.20; Scotchmen, \$5,099; average, \$637.37; Irishmen, \$10,292.55; average, \$467.84; Germans, \$12,408; average, \$459.55. Average weekly wages of married men, \$11.29; single men, \$9.07; all employes, \$10.72. Wages paid per week: One employe, \$2.70; eight, \$3; two, \$4; nine, \$4.50; one, \$4.75; one, \$4.80; two, \$5; one, \$5.25; seventeen, \$6; two, \$6.50; one, \$6.75; three, \$7; forty-seven, \$7.50; two, \$7.80; thirty-three, \$8; two, \$8.25; one, \$8.40; twenty-eight, \$8.50; one, \$8.60; one, \$8.75; one hundred and forty-seven, \$9; ten, \$9.50; three, \$9.60; two, \$9.75; one, \$9.80; one, \$9.90; twenty-four, \$10; two, \$10.20; one, \$10.40; ninety-seven, \$10.50; one, \$10.70; one, \$10.90; twenty-

two, \$11; two, \$11.10; one, \$11.25; two, \$11.40; eight, \$11.50; one, \$11.75; one, \$11.90; one hundred and twenty-three, \$12; one, \$12.15; one, \$12.20; four, \$12.50; one, \$12.60; one, \$12.75; one, \$12.90; three, \$13; seventy-eight, \$13.50; two, \$14.10; one, \$14.30; two, \$14.40; one, \$14.70; fifty, \$15; one, \$15.38; two, \$16; three, \$16.50; one, \$16.66; one, \$16.80; three, \$17.30; one, \$17.50; ten, \$18; one, \$18.75; five, \$19.23; one, \$19.25; two, \$20; one, \$21; one, \$24; one, \$25.

Total family expenses, \$270,756; per capita, \$127.29; Americans, \$217,417; per capita, \$129.26; Canadians, \$17,131; per capita, \$138.15; Englishmen, \$8,583; per capita, \$128.10; Mexicans, \$574; per capita, \$287; Hollanders, \$2,385; per capita, \$149.06; Swedes, \$470; per capita, \$67.14; Scotchmen, \$3,661; per capita, \$159.17; Swiss, \$1,791; per capita, \$162.81; Irishmen, \$9,409; per capita, \$104.54; Germans, \$9,335; per capita, \$88.90. Number owning homes, 299: Americans, 243; Canadians, 12; Englishmen, 8; Hollanders, 3; Swiss, 3; Scotchmen, 4; Irishmen, 15; Germans, 11. 291 married men, 4 single men and 4 widowers own homes. 51+per cent of married men own homes. 81+per cent of home owners are Americans and 19-per cent foreigners. Total value of homes, \$416,640; average, \$1,393.44. Americans, \$345,175; average, \$1,420.47; Canadians, \$15,550; average, \$1,295.83; Englishmen, \$10,250; average, \$1,281.25; Hollanders, \$3,700; average, \$1,233.33; Swiss, \$2,215; average, \$738.33; Scotchmen, \$8,000; average, \$2,000; Irishmen, \$20,300; average, \$1,353.33; Germans, \$11,450; average, \$1,040.90. The homes of 191 employes are mortgaged, which is 63+per cent. Value of mortgaged homes, \$242,090; mortgaged for \$89,585, which is 37+per cent of valuation. The homes of 158 Americans are mortgaged for \$72,855; 7 Canadians for \$4,350; 6 Englishmen for \$3,390; 1 Hollander for \$150; 2 Swiss for \$565; 3 Scotchmen for \$3,050; 6 Irishmen for \$2,100; 8 Germans for \$3,125. During the year 234 employes made payments and improvements upon homes amounting to \$27,535, and 309 men saved \$39,228 in money. Total number of employes who saved, 478, which is 60+per cent. Total savings, including payments and improvements upon homes, \$66,763, which is 17-per cent of total earnings. Total present worth of 719 employes (74 not reporting), \$743,690; average, \$1,035.78. Americans, 590; total, \$623,285; average, \$1,056.41; Canadians, 40; total, \$26,730; average, \$668.25; Englishmen, 23; total, \$17,820; average, \$774.78; Mexican, 1; total, \$1,000; Hollanders, 4; total, \$8,000; average, \$2,000; Swedes, 2; total, \$325; average, \$162.50; Russian, 1; total, \$120; Swiss, 5; total, \$4,900; average, \$980; Scotchmen, 8; total, \$12,580; average, \$1,572.50; Irishmen, 20; total, \$27,500; average, \$1,375; Germans, 25; total, \$21,430; average, \$857.20. Three employes are worth \$5,000 each; one, \$5,500; one, \$5,800; two, \$6,000; two, \$10,000. 10 Canadians had \$3,330 upon arrival in this country; 7 Englishmen, \$505; 2 Swedes, \$235; 1 Swiss, \$30; 2 Scotchmen, \$320; 1 Irishman, \$300; 2 Germans, \$100. Total present worth of foreigners, \$120,405. Number renting homes, 278: Americans, 223; Canadians, 21; Englishmen, 10; Mexican, 1; Hollanders, 2; Swede, 1; Swiss, 1; Scotchmen, 2; Irishmen, 5; Germans, 12. 9 single men and 4 widowers rent and 1 has rent free. 47-per cent of married men and 35+per cent of total employes rent. Total monthly rent, \$2,101.50; average, \$7.66. Total annual rent, \$25,218; average, \$90.71. Per cent of rent to earnings, 18+; per cent of rent to expenses, 19+. Total monthly rent of Americans, \$1,681; average, \$7.54; Canadians, \$176.65; average, \$8.41; Englishmen, \$74.54; average, \$7.45; Mexican, \$6; average, \$6; Hollanders, \$18.60; average, \$9.30; Swede, \$6; average, \$6; Swiss, \$8; average, \$8; Scotchmen, \$12; average \$6; Irishmen, \$36; average, \$7.20; Germans, \$82.75; average, \$6.90.

Number of employes boarding, 189, which is 24-per cent of total employes. 9 live at home and give wages to parents; 6 live at home and support family; 15 live at home and pay no stated amount for board. Total weekly board, \$617.30; average, \$3.27. Americans, 162; total, \$525.05; average, \$3.24; Canadians, 10; total, \$33; average, \$3.30; Englishmen, 6; total, \$20.75; average, \$3.46; Swede, 1; total, \$4; average, \$4; Russian, 1; total, \$3.50; average, \$3.50; Swiss, 1; total, \$3.50; Scotchmen, 2; total, \$7; average, \$3.50; Irishmen, 2; total, \$6.50; average, \$3.25; Germans, 4; total, \$14; average, \$3.50. 104 keep an itemized account of their expenses, which is 13+per cent of total. 474 own sewing machines, which is 81+per cent of those supporting families. 234 own musical instruments which is 29+per cent. Number of musical instruments: Pianos, 42; organs, 112; violins, 42; melodeons, 6; banjos, 6; guitars, 16; horns, 28; flutes, 4; clarionets, 2; drums, 4; accordion, 1; concertina, 1; piccolo, 1; violincello, 1; bass viol, 2. Number of employes who take newspapers and magazines, 634. Americans, 521; Canadians, 36; Englishmen, 23; Hollanders, 5; Swede, 1; Swiss, 5; Scotchmen, 8; Irishmen, 16; Germans, 19. 80-per cent take newspapers and magazines, of which 82+per cent are Americans. Number of dailies taken, 597; story, 61; sporting, 9; religious, 25; labor, 4; scientific, 40; local and other weekly papers, 319; magazines, 53; miscellaneous, 3.

Five hundred and thirty-six work at hand and 216 at machine work and 41 at both. 54 men, or 7-per cent have been injured since engaged as employes. 48 reported that their labor organization had been of financial benefit to them, and 45 no financial bene-

fit. Other than financially, 28 reported that their labor organization had been of benefit socially and educationally; 14 educationally; 11 socially, and 39 no benefit. 408 carry life insurance, amounting to \$526,850; average, \$1,291.29. Americans, 338; total, \$446,400; Canadians, 20; total, \$19,200; Englishmen, 17; total, \$21,250; Hollanders, 3; total, \$6,100; Swede, 1; total, \$100; Swiss, 5; total, \$4,600; Scotchmen, 6; total, \$14,400; Irishmen, 10; total, \$7,750; Germans, 8; total, \$7,050. 51+per cent of employes are insured. 295 belong to benefit societies: Americans, 238; total weekly benefit, \$1,527; average, \$6.42; Canadians, 14; total, \$98; average, \$7; Englishmen, 13; total, \$86; average, \$6.62; Hollander, 1; total, \$7; Swede, 1; total, \$7; Swiss, 5; total, \$35; average, \$7; Scotchmen, 5; total, \$30; average, \$6; Irishmen, 11; total, \$68; average, \$6.18; Germans, 7; total, \$32; average, \$4.57. Total weekly benefit, \$1,890; average, \$6.41. 37+per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
GRAND RAPIDS.

TABLE No. 3.—*Showing the Individual Reports*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
WM. HARRISON.												
Painter	17	Holland	Holland	s						36		first work in U. S.
Helper	17	"	"	s						48	4	no work
Blacksmith	19	Germany	Germany	s						46	6	sick and no work
Painter	18	U. S.	"	s						47	5	no work
"	20	Holland	Holland	s						48	4	"
"	21	"	"	s				1	1	48	4	"
Blacksmith	22	U. S.	Germany	s						47	5	"
Clerk	17	"	U. S.	s						52		
Helper	18	"	"	s						48	4	no work
Painter	17	"	Holland	s						47	5	"
Shipping clerk	18	"	U. S.	s						45	7	sick and no work
Blacksmith	19	Holland	Holland	s						45	7	"
Painter	23	"	"	s						48	4	no work
Blacksmith	42	U. S.	U. S.	m	4	4	4		5	52		
"	24	"	"	m					1	48	4	no work
"	24	"	"	m	1	1			2	48	4	"
"	22	Germany	Germany	m					1	48	4	"
Yard man	49	"	"	w'r	2					46	6	sick and no work
Wood worker	50	U. S.	U. S.	w'r	2	2	2	1	3	46	6	sickness and death in family
Painter	61	Holland	Holland	w'r	1					47	5	no work
Laborer	27	Germany	Germany	m	1	1			2	44	8	sick and no work
"	36	Holland	Holland	m	3	3			4	48	4	no work
Yard man	40	U. S.	England	m	2	2	2		3	48	4	"
Painter	22	"	Germany	m					1	48	4	"
"	49	"	U. S.	m	4	2			3	48	4	"
"	25	"	Germany	m	1	1			2	48	4	"
"	32	Holland	Holland	m	4	4	3		5	48	4	"
"	30	"	"	m	3	3	1		4	52		
"	50	U. S.	U. S.	m	5	3	3		4	48	4	no work
"	50	Holland	Holland	m	1	1			2	36		first work in U. S.
"	50	"	"	m	1	1	1		2	48	4	no work
Foreman	34	"	"	m	1	1			2	52		
Fireman	29	U. S.	U. S.	m	2	2			3	48	4	shut down
Laborer	51	Austria	Austria	m	5	2	1		3	48	4	no work
"	41	Sweden	Sweden	m	3	3	3		4	52		
Helper	32	Canada	Ireland	m	1	1	1		2	48	4	no work
Laborer	47	Ireland	"	m	3	1			2	48	4	"
Blacksmith	35	Germany	Germany	m	3	3	3		4	46	6	sick and no work
Helper	29	Holland	Holland	m	2	2	1		3	48	4	no work
Shipping clerk	27	U. S.	U. S.	m	1	1			2	52		
Blacksmith	19	"	"	s						47	5	no work
Helper	13	"	"	s						46	6	"
Book-keeper	17	Canada	Ireland	s						48	4	"
Stenographer	29	U. S.	U. S.	s						52		
"	23	"	"	s						52		
Type writer	16	"	"	s						52		
Blacksmith	29	"	"	s						48	4	no work
"	22	Sweden	Sweden	s						48	4	"
"	30	Holland	Holland	s						47	5	"
"	24	Sweden	Sweden	s						46	6	"
"	23	U. S.	U. S.	s						48	4	"

of the Employés Canvassed in Grand Rapids.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.	Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning a home, its value.	If in debt on home, am't.		Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.	
\$6 00	\$216 00		\$216 00						*	*	*			8 mo	
3 00	144 00		144 00						*	*	*			1 1/2	
5 00	230 00		230 00						*	*	*			5	
3 00	141 00		141 00						*	*	*			1 1/2	
6 00	238 00		238 00							†					
7 50	360 00		360 00	\$360						†				2	
10 50	493 50		493 50				\$150			\$4 00	\$2000	1	\$5 00		\$600
4 50	234 00		234 00						40	3 00					
6 00	288 00		288 00						20	3 50					
6 00	282 00		282 00							3 00					
6 00	270 00		270 00						25	3 00					
5 00	225 00		225 00							3 00				14	
7 50	360 00		360 00						25	3 50				21	60
15 00	780 00		780 00	700	\$1500		\$80					2000	1	10 00	2100
10 50	504 00		504 00	480	900	\$150						1000			1000
10 00	480 00		480 00	480	700	250						1000			900
8 50	408 00		408 00	400					\$5 00				1	5 00	200
7 50	345 00		345 00							4 00				20	600
12 00	552 00		552 00	548	1000										1600
7 50	352 50		352 50							3 50				8	\$200
7 25	319 00		319 00	\$90						5 00				11	350
7 50	360 00		360 00	360	600	200								18	550
9 00	432 00		432 00	430						6 00					600
10 50	504 00		504 00	500						6 00					300
12 00	576 00		576 00	575						9 00					600
12 00	576 00		576 00	570						6 00					400
10 00	480 00		480 00	480	1000									17	1700
12 00	624 00		624 00	620	1200									16	2000
12 00	576 00		576 00	575						8 00					800
7 50	270 00	\$216	486 00	408			80			6 00				8 mo	10
7 50	360 00	120	480 00	480						4 00				1 1/2	45
12 00	624 00		624 00	600	1200									21	80
9 00	432 00		432 00	430	800	300									1200
9 00	432 00	150	582 00	600						9 00				13	35
9 00	468 00	100	568 00	580	900									9	50
10 50	504 00		504 00	500						5 00				8	350
7 50	360 00	120	480 00	480						5 00				12	15
15 00	690 00		690 00	675	200							1000		16	2000
7 50	360 00		360 00	360	700							2000		19	1000
15 00	780 00		780 00	675	2000		100								3000
7 75	364 25		364 25						*	*	*				
3 00	188 00		188 00						*	*	*				
4 00	192 00		192 00						*	*	*				
18 00	936 00	100	1036 00					200		5 00					800
12 00	624 00		624 00					150		4 00					400
5 00	260 00		260 00							3 00					
10 00	490 00		490 00					150		4 00					400
12 00	576 00		576 00					120		3 50				2	150
9 00	423 00		423 00							3 50				8 1/2	200
12 00	552 00		552 00					200		3 50				4	350
8 25	306 25		306 00							2 00					150

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Blacksmith	28	Sweden	Sweden	s	—	—	—	—	—	48	4	no work
"	35	Germany	Germany	s	—	—	—	—	—	45	7	sick and no work
"	21	U. S.	U. S.	s	—	—	—	—	—	46	6	"
Shipping clerk	27	"	"	m	1	1	—	—	2	52	—	no work
Blacksmith	27	"	"	m	1	1	—	—	2	48	4	"
"	24	"	"	m	—	—	—	—	—	48	4	"
"	33	"	"	m	—	—	—	—	—	48	4	"
"	35	Canada	Canada	m	—	—	—	—	—	48	4	"
"	36	Germany	Germany	m	3	3	2	—	4	46	6	sick and no work
"	50	"	"	m	4	4	3	—	5	48	4	no work
"	33	Austria	Austria	m	2	2	1	—	3	48	4	"
"	34	Germany	Germany	m	2	2	—	—	3	48	4	"
"	34	Poland	Poland	m	—	—	—	—	—	48	4	"
"	25	Germany	Germany	m	—	—	—	—	—	48	4	"
"	44	"	"	m	4	3	3	—	4	48	4	"
"	24	Sweden	Sweden	m	4	4	2	—	5	48	4	"
"	32	"	"	m	1	1	—	—	2	48	4	"
"	47	Germany	Germany	m	6	6	5	—	7	48	4	"
"	50	Sweden	Sweden	m	2	2	2	—	3	48	4	"
Clerk	26	U. S.	U. S.	m	—	—	—	—	—	52	—	no work
Superintendent	40	"	"	m	4	4	4	—	5	52	—	no work
Helper	27	Germany	Germany	m	2	2	—	—	3	47	5	"
Machine hand	24	U. S.	England	m	—	—	—	—	—	48	4	"
Wood worker	26	"	U. S.	m	1	1	—	—	2	52	—	no work
Wagon maker	40	"	Holland	m	3	3	3	—	4	48	4	"
"	39	Germany	Germany	m	5	5	5	—	6	48	4	"
Wood worker	27	U. S.	England	m	3	3	—	—	4	48	4	"
Yard man	40	Germany	Germany	m	3	3	2	—	4	48	4	"
Laborer	32	Holland	Holland	m	2	2	1	—	3	48	4	"
Machine hand	48	U. S.	U. S.	m	2	2	2	—	3	48	4	"
"	41	Germany	Germany	m	4	4	3	—	5	47	5	"
Helper	38	Holland	Holland	w'r	1	—	—	—	—	48	4	"
Wood worker	52	U. S.	U. S.	m	5	3	2	—	4	48	4	"
"	60	"	Germany	m	4	—	—	—	1	45	7	sick and no work
Helper	25	Germany	"	m	1	1	—	—	2	47	5	no work
Wood worker	48	U. S.	"	m	3	2	2	—	3	43	4	"
"	36	"	U. S.	m	3	3	3	—	4	48	4	"
"	25	"	"	s	—	—	—	2	2	48	4	"
"	22	"	"	s	—	—	—	—	—	48	4	"
"	21	"	"	s	—	—	—	—	—	48	4	"
Helper	23	Germany	Germany	s	—	—	—	—	—	48	4	"
Wood worker	18	U. S.	U. S.	s	—	—	—	—	—	40	12	sick and no work
Helper	20	"	Ireland	s	—	—	—	—	—	46	6	no work
Machine hand	21	Holland	Holland	s	—	—	—	—	—	47	5	"
Wood worker	22	U. S.	U. S.	s	—	—	—	—	—	47	5	"
Laborer	21	"	Holland	s	—	—	—	—	—	48	4	"
"	20	Holland	"	s	—	—	—	—	—	46	6	"
"	23	Germany	Germany	s	—	—	—	—	—	48	4	"
Wood worker	16	U. S.	Poland	s	—	—	—	—	—	48	4	"
"	20	Holland	Holland	s	—	—	—	—	—	48	4	"
"	17	U. S.	Germany	s	—	—	—	—	—	46	6	"
Machine hand	23	"	U. S.	s	—	—	—	—	—	52	—	"
Helper	20	"	"	s	—	—	—	—	—	45	7	no work

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$432 00		\$432 00							\$3 50				3	\$80	\$120
10 50	472 50		472 50					\$80		4 00				8	20	200
9 00	414 00		414 00							4 00						50
15 00	780 00		780 00	\$700	\$2500		\$50				\$2000					\$300
12 00	576 00		576 00	576					\$8 00							500
9 00	432 00		432 00	480					6 00							500
8 50	408 00		408 00	400	900											1300
7 50	360 00		360 00	360					8 00					25		400
12 00	552 00		552 00	550	900	\$800								7	75	1200
10 50	504 00		504 00	500	1200	300								15	40	1500
7 50	360 00		360 00	360	800									17		1000
9 00	482 00		482 00	480					4 00					11	15	400
10 50	504 00		504 00	500	900									19		1200
7 50	360 00		360 00	360					5 00					3	10	200
9 00	482 00	\$150	582 00	582	800									8½	100	1200
12 00	576 00		576 00	575					8 50					10	20	350
9 00	482 00		482 00	482					6 00					6	35	350
12 00	576 00		576 00	620	1000									16	35	2800
15 00	720 00	144	864 00	820	3000			240	7 50					25	10	3600
18 00	986 00	120	1066 00	725	3000			300			3000					5000
18 00	986 00		986 00	850	2000		80				3000					3100
9 00	428 00		428 00	428					5 00					16		400
10 00	480 00		480 00	480	700	100					2000					800
13 50	702 00		702 00	600	1000		100				2000					1500
12 00	576 00		576 00	570	800	200					1000					1000
15 00	720 00		720 00	680	900		90				1000	1	\$5 00	27		1500
9 00	482 00		482 00	482	800	150					2000					1400
9 00	482 00	80	512 00	512					5 00		2000	1	5 00	10		580
7 50	360 00		360 00	360	800	400								7	20	500
12 00	576 00	100	676 00	606	1200			70			2000	1	5 00			2000
10 50	498 50	100	598 50	553	900	100	40					1	5 00	20		1400
6 00	288 00		288 00							8 75				16		400
13 50	648 00	200	848 00	598	2000		250				2000					3000
12 00	540 00		540 00	470	1000		70									1700
8 50	399 50		399 50	399					4 00					22		
15 00	720 00		720 00	570	1200		150									2000
13 50	648 00		648 00	578				75	6 00							800
13 50	648 00		648 00	598	800		50				2000					1100
10 50	594 00		594 00	504				60		\$ 50						350
7 50	360 00		360 00					80		\$ 00		1	5 00			
7 50	360 00		360 00							\$ 50				13		50
4 00	160 00		160 00							\$ 00						
6 00	276 00		276 00							4 00						
7 50	362 50		362 50					20		\$ 50				18		50
7 50	352 50		352 50					25		4 00						200
7 25	348 00		348 00					30		\$ 50						75
7 50	345 00		345 00							\$ 75				5		60
7 00	336 00		336 00							\$ 50				4		50
5 00	240 00		240 00					*		*						
9 00	432 00		432 00					60		4 00				8		100
8 00	336 00		336 00							2 50						
12 00	624 00		624 00					125		4 00		1	5 00			600
7 50	337 50		337 50							4 00						25

* Lives at home and gives wages to parents.

TABLE No. 3.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Helper.....	21	Germany	Germany	s						48	4	no work
Foreman.....	40	U. S.	U. S.	m	2	2			2	52		
Wood worker.....	40	U. S.	U. S.	m	3	3			4	48	4	no work
".....	31	Germany	Germany	m	3	3			4	48	4	"
".....	23	U. S.	U. S.	m	1				1	48	4	"
".....	29	"	England	m	2	2			2	48	4	"
".....	43	Poland	Poland	m	5	5	4		6	48	4	"
".....	35	U. S.	U. S.	m	2	2			3	46	6	sick and no work
".....	52	Germany	Germany	m	5	5			4	48	4	no work
Laborer.....	41	"	"	m	3	3	2		3	48	4	"
Wood worker.....	51	U. S.	Canada	m	4	2	2		3	52		
".....	25	"	U. S.	m	1	1			2	48	4	no work
".....	30	"	Canada	m	2	2	1		3	48	4	"
".....	43	Austria	Austria	m	6	4	3		5	46	6	sick and no work
Machine hand.....	37	Holland	Holland	m	3	3	3		4	48	4	no work
Wood worker.....	45	U. S.	Ireland	m	3	3	2		4	48	4	"
".....	36	Holland	Holland	m	4	4	4		5	46	6	sick and no work
".....	24	Germany	Germany	m	2	2			3	48	4	no work
Machine hand.....	32	U. S.	U. S.	m	2	2	2		3	48	4	"
".....	31	Holland	Holland	m	1	1	1		2	48	4	"
PERKINS & Co.												
Manager.....	26	U. S.	U. S.	m	1	1			2	52		
Helper.....	27	"	"	m	2	2			3	50	2	sick
Machinist.....	31	Sweden	Sweden	m	3	3			4	52		
".....	35	Germany	Germany	m	3	3			4	52		
".....	45	U. S.	Canada	m	1				1	52		
".....	34	Norway	Norway	m	8	8	5		9	52		
".....	22	U. S.	U. S.	m					1	52		
".....	50	"	"	m	1	1			2	52		
".....	32	"	"	m	1	1			1	46	6	sickness in family
Wood worker.....	39	Canada	Canada	m	2	2	2		3	52		
Machinist.....	28	"	"	m	9	9	5		10	52		
Helper.....	35	U. S.	U. S.	m	3	3	2		4	52		
Machinist.....	47	Sweden	Sweden	m	5	5	3		6	52		
Machine hand.....	32	U. S.	U. S.	wr	1	1			1	52		
Machinist.....	24	"	"	m	2	2			3	52		
".....	27	Canada	Canada	m					1	44	8	slack work
".....	24	U. S.	U. S.	m	1	1			2	52		
Foreman.....	29	"	"	m	3	3			4	52		
Machinist.....	26	Sweden	Sweden	m	4	4			5	52		
".....	38	U. S.	U. S.	m	2	2	2		3	52		
".....	33	Canada	Ireland	wr	1	1			1	52		
".....	25	"	Scotland	m	2	2			3	52		
".....	25	Holland	Holland	m					1	52		
".....	51	Ireland	Ireland	m	6	2	1		3	46	6	sick
".....	44	Canada	Canada	m	3	2	2		3	52		
".....	35	U. S.	U. S.	wr	3	3	2		3	50	2	sick
".....	42	Germany	Germany	wr	2	2	1		2	52		
Foreman.....	53	U. S.	U. S.	m	4				1	52		
Machinist.....	23	Germany	Germany	m	1	1			2	49	3	sick
".....	25	U. S.	U. S.	m	1	1			2	52		
".....	42	"	Germany	m	4	4	3		5	49	3	sickness in family

TABLE No. 3.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$7 50	\$360 00		\$360 00					\$100		\$3 50				16	\$150
16 50	858 00		858 00	\$700	\$2000		\$150				\$2000				2800
15 00	720 00		720 00		650	900	50				2000				1400
9 00	432 00		432 00		432	700	\$250							17	800
12 00	576 00		576 00		496	800	200	80			1000	1	\$5 00		700
13 50	648 00		648 00		548	1000	300	100			2000				1200
9 00	432 00	\$240	672 00		670	900								21	\$25
15 00	690 00		690 00		675	900					2000	1	5 00		1400
12 50	648 00	120	768 00		638	800	100	130						34	1300
7 50	360 00		360 00		360				\$5 00					18	450
15 00	780 00		780 00		650	1200		130			2000	1	5 00		1900
10 50	504 00		504 00		500	900	200				1000				900
9 00	432 00		432 00		410				20	6 00	2000				800
10 00	460 00	110	570 00		520	800	150	50			1000			19	35
9 00	432 00		432 00		430				5 00					13	30
12 50	648 00	120	768 00		645	1000		120			2000				1600
9 00	414 00		414 00		400				5 00			1	5 00	12	20
9 00	432 00		432 00		410				5 00			1	5 00	13	600
10 50	504 00		504 00		475	800		25			2000				1500
8 50	408 00		408 00		400				6 00					8	45
19 23	1000 00		1000 00		600	3500	500	300	100		3000				4000
7 50	375 00		375 00		350	800		25				1	5 00		1200
10 50	546 00		546 00		466	2000	1200	80				1	5 00	2	600
12 00	624 00		624 00		600	1200	500					2	10 00	9	60
9 00	468 00		468 00		450				8 00			1	5 00		500
12 00	624 00		624 00		620				8 00			1	5 00	16	500
12 00	624 00		624 00		600				7 00			1	5 00		400
12 00	624 00		624 00		580				9 00			1	5 00		500
13 50	621 00		621 00		700				10 00		2000	1	5 00		850
10 50	546 00		546 00		520	1200	500							21	1500
10 50	546 00		546 00		548	800	210							16	1500
7 50	390 00		390 00		390				8 00			1	5 00		400
15 00	780 00		780 00		780	2000	500							21	45
7 50	390 00		390 00					50		3 50		1	5 00		700
12 00	624 00		624 00		500			100	6 00						700
12 00	528 00		528 00		525	2000	1000					1	5 00	23	1500
12 00	624 00		624 00		580			80	7 00		1000	2	10 00		600
18 00	986 00		986 00		530	2600	1300	400							2000
9 90	514 80		514 80		500				5 00			1	5 00	2	
13 50	702 00		702 00		600			30	5 00		3000	2	12 50		500
9 00	468 00		468 00					100		4 75		1	5 00	10	25
12 00	624 00		624 00		570			40	4 00			1	5 00	14	800
11 40	592 80		592 80					120		6 00		1	5 00	10	800
12 50	575 00		575 00		475	800		100				1	5 00	20	40
15 00	780 00		780 00		650	1800		100			3000	2	10 00	38	2700
15 00	750 00		750 00		650	1600		100			2000	1	5 00		2300
13 50	702 00		702 00		500	1300		200				1	5 00	16	100
13 50	702 00		702 00		500	700		120				1	5 00		1200
13 50	661 50		661 50		480	1000	400	175				1	5 00	16	1600
10 50	546 00		546 00		520				6 00			1	5 00		700
10 00	490 00	140	630 00		530	1200		100				1	5 00		1500

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	29	Sweden	Sweden	m	2	2	1		3	52		
"	25	U. S.	Germany	m	2	2			2	44	8	slack work
Machine hand	38	Russia	Russia	m	3	3	1		4	52		
Molder	28	U. S.	U. S.	m	2	2			2	52		
Machinist	57	U. S.	Canada	m	3	3	2		5	52		
Molder	28	"	England	m	2	2			2	52		
"	32	"	U. S.	w'r	1	1			1	46	6	death of wife
"	33	Russia	Russia	m	3	3	1		4	52		
"	37	Austria	Austria	w'r	1	1			1	45	7	sickness of family
Machinist	25	U. S.	U. S.	s	1	1			1	52		
"	22	Sweden	Sweden	s						52		
"	22	U. S.	Canada	s						52		
"	25	Sweden	Sweden	s						52		
"	23	U. S.	Holland	s						52		
Stenographer	18	"	U. S.	s						52		
Clerk	17	"	"	s						42	10	slack work
Book-keeper	19	"	"	s						52		
Machine hand	23	Holland	Holland	s						52		
Machinist	39	Germany	Germany	s						52		
"	19	England	England	s						52		
"	27	Canada	Scotland	s						52		
Helper	29	U. S.	U. S.	s						46	6	slack work
Machinist	47	"	"	s						52		
Machine hand	17	"	"	s						46	6	no work
Machinist	26	"	Scotland	s						47	5	slack work
"	21	"	U. S.	s						49	6	"
Machine hand	18	"	"	s						52		
Machinist	25	"	Ireland	s						49	4	sick
"	23	Scotland	Scotland	s						36		first work in U. S.
Machine hand	21	Canada	England	s						48	4	no work
Machinist	22	U. S.	Sweden	s						52		
"	22	"	U. S.	s						52		
Helper	22	"	Holland	s						46	6	slack work
Core maker	22	Canada	Ireland	s						52		
Molder	27	U. S.	U. S.	s						52		
"	18	"	Germany	s						52		
"	29	"	Sweden	s						52		
Painter	23	"	U. S.	s						52		
"	21	Canada	Scotland	s						52		
Machinist	23	U. S.	U. S.	s						49	4	slack work
"	21	"	"	s						52		
Pattern maker	32	"	"	s						51	1	vacation
Machine hand	16	"	"	s						52		
"	18	"	"	s						52		
Helper	38	"	"	m	1	1	1		2	50	2	rest
Molder helper	43	Germany	Germany	m	7	5	3		6	52		
Cupola tender	30	U. S.	U. S.	m	2	2			2	52		
Helper	28	Poland	Poland	m	2	2			2	52		
Foreman	35	U. S.	U. S.	m	2	2	2		3	52		
Teamster	38	Canada	Ireland	m	1	1	1		2	47	5	slack work
Foreman	56	Germany	Germany	m	2	2			3	52		
Machinist	25	U. S.	"	m	1	1			2	52		
"	30	"	U. S.	m					1	52		

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$624 00		\$624 00	\$500	\$650	\$300	\$120					1	\$5 00	2½	\$120	\$600
15 00	690 00		690 00	600	600			60	\$8 00			1	5 00			580
7 50	390 00		390 00	390	560											750
12 00	624 00		624 00	600	1000			20			\$1000	1	5 00	3½	20	1800
13 00	780 00		780 00	620	1500		150					1	5 00			2200
11 10	577 20		577 20	540					6 00			1	5 00			500
12 00	552 00		552 00							\$4 00	\$500	1	5 00			800
12 00	624 00		624 00	540	800	800	80					1	5 00	18		900
10 50	472 50		472 50							4 00				8		400
10 50	546 00		546 00					150		8 75		1	5 00			600
10 50	546 00		546 00					80		8 50		1	5 00	2½	20	180
8 40	496 80		496 80					65		8 50		1	5 00			175
9 00	468 00		468 00					80		8 50		1	5 00	8	100	1400
9 00	468 00		468 00					200		4 00		1	5 00			500
9 00	468 00		468 00					175		4 00	1000	1	5 00			300
7 50	815 00		815 00					20		2 00						
8 00	416 00		416 00					200		2 50		1	5 00			500
8 40	496 80		496 80					60		8 50		1	5 00	17		140
10 50	546 00		546 00					220		4 50				2	100	850
7 50	390 00		390 00							5 00		1	5 00	6		
9 00	468 00		468 00							4 00		1	5 00	4	100	850
7 50	845 00		845 00							8 50		1	5 00			200
12 00	624 00		624 00					75		4 00						1800
4 00	184 00		184 00							8 00		1	5 00			
12 00	564 00		564 00					175		4 50						500
10 50	483 00		483 00					100		3 00						200
5 00	260 00		260 00					60		8 50						
12 00	576 00		576 00					80		4 00		1	5 00			250
12 00	482 00		482 00							9 50		1	5 00	½		
7 50	360 00		360 00							8 50		1	5 00	8		80
11 40	592 80		592 80					150		8 50	2000	2	17 50			900
7 50	390 00		390 00					70		3 50						300
8 40	396 40		396 40					80		4 00		1	5 00			600
7 50	360 00		360 00					80		3 50			1 40	7		175
15 00	780 00		780 00					200		4 00		1	5 00			1500
9 00	468 00		468 00					50		6 00						
15 00	780 00		780 00					250		4 50		1	5 00			2300
10 50	546 00		546 00					120		4 00		1	5 00			400
7 50	390 00		390 00					70		4 00		1	5 00	2		160
9 00	432 00		432 00					45		4 00		1	5 00			150
12 00	624 00		624 00					250		4 00		1	5 00			850
10 50	585 50		585 50					120		4 00		3	15 00			900
4 00	208 00		208 00					*		*						
6 00	312 00		312 00					*		*						
7 50	375 00		375 00	875					5 00		1000	1	5 00			400
7 50	390 00	\$160	550 00	550	1400	200						1	5 00	16	35	1900
11 40	592 80		592 80	550				40	7 00			1	5 00			600
7 50	396 00		396 00	390	800							1	5 00	10		1100
18 00	936 00		936 00	620				300	12 50			1	5 00			1600
10 00	470 00		470 00	480					6 00			1	5 00	7	125	800
28 00	1196 00		1196 00	750	3000		250	175				1	5 00	19	120	4200
12 00	624 00		624 00	620					10 00			1	5 00			700
8 40	436 80		436 80	420					6 00			1	5 00			500

* Lives at home and gives wages to parents.

TABLE NO. 3.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	35	U. S.	U. S.	m	2	2	2		3	52		
"	33	"	"	m	2	2		1	4	52		
"	29	"	"	m					1	45	4	sick
"	29	"	"	m					1	50	2	vacation
"	34	Canada	"	m	1	1			2	52		
"	31	U. S.	"	m	3	3			4	50	2	sick
Pattern maker	33	"	"	m	1	1			1	50	2	"
"	24	"	"	m					1	52		
"	35	Sweden	Sweden	m	3	3	2		4	52		
"	31	U. S.	U. S.	m	1	1	1		2	52		
Carpenter	36	"	"	m	1	1	1		3	44	8	lost a finger
Shipping clerk	46	"	"	m	2	2	2		3	44	8	sick
Civil engineer	60	Holland	Holland	m	7				1	42	10	away
Blacksmith	34	Germany	Germany	m	3	3			4	52		
Helper	39	Canada	Canada	m					1	46	6	no work
"	29	Germany	Germany	m	3	3	1		4	52		
Blacksmith	29	"	France	m	2	2			3	52		
GRAND RAPIDS BRASS CO.												
Filer	18	Canada	Canada	s						26		first work in U. S.
Grinder	16	Germany	Germany	s						50	2	rest
Machine hand	18	"	"	s						50	2	sick
"	16	U. S.	"	s						50	2	vacation
Book-keeper	19	Canada	Canada	s						52		
"	18	"	"	s						52		
Machine hand	14	U. S.	"	s						49	3	away from home
"	14	"	England	s						46	6	sick
Polisher	19	"	Holland	s						47	5	out of town
"	18	Holland	"	s						48	4	no work
Grinder	17	"	"	s						52		
Machine hand	17	U. S.	U. S.	s						48	4	lame
Grinder	16	"	Germany	s						52		
Helper	21	"	"	s						48	4	sick
Molder	27	Canada	Ireland	s						52		
Machine hand	19	U. S.	U. S.	s						46	6	sickness
Machinist	22	England	England	s						49	3	vacation
"	28	U. S.	U. S.	s						50	2	"
Molder	19	"	"	s				1	1	52		
Oxidizer	23	"	Germany	s						52		
Filer	21	Holland	Holland	s						34	18	not ans.
Grinder	23	U. S.	Ireland	s						52		
Polisher	23	"	Austria	s						52		
Grinder	17	"	U. S.	s						52		
Finisher	17	"	"	s						50	2	rest
Grinder	16	"	"	s						52		
"	16	"	Ireland	s						52		
Polisher	21	"	U. S.	s						60	2	vacation
"	28	"	"	s						53		
Machinist	47	Germany	Germany	m	1	1	1		2	53		
"	29	U. S.	U. S.	m					1	53		
"	31	"	"	m					1	52		
"	29	Holland	Holland	m	3	3	2		4	40	12	no work
"	25	U. S.	U. S.	m					1	46	6	sickness

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$12 00	\$624 00		\$624 00	\$370				\$50	\$8 00		\$2500	2	\$10 00		\$670
12 00	624 00		624 00	610					12 00			1	10 00		900
10 50	504 00		504 00					40		\$7 50					500
12 00	600 00		600 00	540				60	5 00				5 00		700
14 00	728 00		728 00	650				60	11 50			1	5 00	5	900
12 00	600 00		600 00	720	\$3200		\$80					2	10 00		5000
12 00	600 00		600 00	500	4500	\$1000	100								4300
12 00	624 00		624 00	550				50	7 00			2	10 00		790
18 25	638 00		638 00	560				100	5 00			1	5 00	3	475
12 00	624 00		624 00	520				80	5 00			2	10 00		800
10 50	462 00		462 00	430					8 00						600
10 00	440 00		440 00	440	650	450						1	5 00		1000
36 00	1512 00		1512 00	1000	4000		500				5000			15	6000
11 40	592 80		592 80	475	2500	1400	100					1	3 00	8	1800
8 00	368 00		368 00	360					5 00			1	5 00	20	700
7 50	390 00		390 00	390	800							1	3 00	6	1200
12 00	624 00		624 00	550	1800		60					2	10 00	9	2000
4 80	124 80		124 80					*		*				14	
3 00	150 00		150 00					*		*				6	
6 00	300 00		300 00					*		*					
4 50	225 00		225 00					*		*					
7 50	390 00		390 00					70		†				11	180
4 80	249 60		249 60					*		*				17	
3 00	147 00		147 00					*		*					
2 40	110 40		110 40					*		*					
7 20	336 40		336 40					*		*					
4 20	201 60		201 60					*		*				1	
6 00	312 00		312 00					*		*				9	
6 00	288 00		288 00					*		*					
6 00	312 00		312 00					*		†					
7 50	360 00		360 00							†					
9 00	468 00		468 00							4 75				25	1500
6 00	216 00		216 00					50		3 00					200
12 00	598 00	\$100	698 00					300		3 00				2	1500
15 00	750 00		750 00					220		4 00					1600
10 50	546 00		546 00	480				60	6 00						
9 00	468 00		468 00					100		4 00	1000	1	5 00		500
4 20	142 80		142 80							3 50				2	
9 00	468 00		468 00					150		4 00					800
15 00	780 00		780 00					500		4 50					2500
9 00	468 00		468 00					100		4 00					400
6 00	300 00		300 00					25		4 00					200
5 40	280 80		280 80					50		3 50					200
3 60	187 20		187 20							3 00					
11 00	550 00		550 00					200		3 75					1200
10 20	530 40		530 40					200		4 00					1200
8 58	461 76		461 76	400				10	8 00					23	400
15 00	780 00		780 00	500				270	8 00		1000				800
16 50	858 00	200	1058 00	600				450	8 00		2000				3500
11 00	440 00		440 00	410	1200	500						1	5 00	21	1200
13 20	607 20		607 20	520				100	7 00						700

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE NO. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	31	Canada	Ireland	m	1	1			2	49	3	sickness
"	33	Holland	Holland	m	4	4	3		5	52		
Foreman	33	U. S.	England	m				1	2	52		
Filer	46	Canada	Canada	m	9	8	3		9	52		
Grinder	26	Sweden	Sweden	m	2	2			3	52		
Pattern maker	27	U. S.	U. S.	m	2	2	1		3	52		
Polisher	38	Holland	Holland	wr	4	4	3		4	52		
Machinist	25	U. S.	U. S.	m	1	1			2	50	2	rest
Filer	35	"	"	m	6	4	3		5	52		
Grinder	25	Holland	Holland	m	2	2			3	50	2	vacation
Polisher	30	U. S.	Ireland	m	1	1			2	49	3	rest
Molder helper	29	Holland	Holland	m	2	2	1		3	52		
Furnace tender	52	Germany	Germany	m					1	52		
Molder helper	54	Sweden	Sweden	m	3	2			3	52		
Molder	38	Germany	Germany	m	8	3	2	1	5	52		
"	22	England	England	m					1	52		
Machinist	25	U. S.	U. S.	m	1	1			2	52		
"	21	"	Canada	m					1	52		
Cleaner	42	"	U. S.	m					1	50	2	sick
Machinist & draftsman	35	Germany	Germany	m	4	4	2		5	52		
Polisher	22	England	England	m					1	52		
Machinist	28	Russia	Russia	m					1	44	8	sick
"	49	Sweden	Sweden	m	4	4	3		5	52		
"	45	U. S.	U. S.	m	4	4	4	1	6	52		
Packer	17	"	"	s						52		
"	17	"	"	s						49	3	sick
Grinder	18	"	Holland	s						52		
Polisher	20	Canada	England	s						45	7	no work
Finisher	20	U. S.	Sweden	s						44	8	sick
"	19	"	U. S.	s						52		
Polisher	21	"	Canada	s						50	2	sick
Machinist	23	Germany	Germany	s						52		
Furnace tender	23	U. S.	U. S.	s						52		
Molder	23	"	"	s						52		
"	22	"	"	s						52		
"	25	"	Holland	s			1	1	48	4		sick
"	21	"	Germany	s						52		
Foreman	25	Sweden	Sweden	s						52		
Grinder	22	"	"	s						47	5	sick
Machinist	19	Germany	Germany	s						52		
Filer	22	U. S.	"	s						44	8	sick
Packer	21	"	U. S.	s						52		
Machinist	32	Holland	Holland	s						44	8	sick
"	55	U. S.	U. S.	s			2	2		52		
Molder	26	Germany	Germany	s						52		
"	21	Sweden	Sweden	s						52		
Grinder	23	U. S.	U. S.	s						52		
Filer	14	"	"	s						45	7	sick
Oxidizer	15	"	"	s						52		
"	16	"	"	s						52		
Plater	16	"	"	s						52		
Laborer	17	England	England	s						49	3	sick
Filer	14	U. S.	Sweden	s						48	4	"

TABLE No. 3.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payment on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$588 00		\$588 00	\$555					\$9 00					23		\$800
9 00	468 00		468 00	468	\$1000									35		1600
23 00	1196 00	\$250	1446 00	750				\$675	12 00		\$2000					3400
7 80	405 60	74	489 60	490					6 00					1 1/4	\$800	800
7 80	405 60		405 60	325	800			75						1 1/4	500	1200
21 00	1092 00	300	1392 00	620	2500		\$300	400			2000	1	\$15 00	1 1/4		5000
18 50	702 00	150	852 00	600	1800			250								2400
15 00	750 00		750 00	550	2500		200				2000	1	5 00	21		\$700
7 20	\$74 40		\$74 40	\$74					7 00							400
7 50	\$75 00		\$75 00	\$75					6 00					9		500
15 00	785 00		785 00	450				100	8 00							1200
7 50	390 00	60	450 00	390				60	6 00					8	100	1000
13 50	702 00		702 00	530	1200			100						8	800	2000
7 20	\$74 40	624	998 40	680	1200			300						6	100	2300
14 00	728 00		728 00	700	500									10		1100
13 20	696 40		696 40	680					6 50					8		500
10 20	530 40		530 40	520					8 00							600
10 20	530 40		530 40	530					10 00							400
7 50	\$75 00		\$75 00	850	3000											\$700
15 00	986 00	200	1186 00	680				500	7 00		1000	1	5 00	14		2200
9 00	468 00		468 00	450				10	5 00					1 1/4	200	300
12 00	528 00		528 00	525	1600	\$1200								16		1000
10 20	530 40		530 40	530	900	250								20		1400
14 00	728 00	100	828 00	648				180	10 00							2500
8 25	169 00		169 00							\$2 55						
3 00	147 00		147 00							2 50						
6 00	\$12 00		\$12 00					50		3 50						
10 00	450 00		450 00					210		3 50				10		\$30
9 00	\$96 00		\$96 00					200		3 50						500
4 80	249 60		249 60							3 50						
7 50	\$75 00		\$75 00					25		4 00						185
10 00	520 00	120	640 00					200		4 50				8	400	2500
9 00	468 00		468 00					300		3 50						700
13 50	702 00		702 00					300		4 50						800
10 20	530 40		530 40					200		4 00						500
18 50	648 00		648 00	500				75								300
4 80	249 60		249 60							4 00						
22 00	1144 00	850	1494 00					800		5 00				12		\$800
7 20	\$88 40		\$88 40					60		3 50				2		100
10 20	530 40		530 40					200		3 50				6		500
5 40	237 60		237 60					50		3 00						175
6 00	\$12 00		\$12 00					100		3 25						300
15 00	680 00		680 00					400		4 00				22		1100
12 50	650 00	120	770 00	520	1200		250				2000	1	12 50			\$800
8 88	461 78		461 78					175		4 00				1	100	275
12 00	624 00		624 00							†				6		
4 80	249 60		249 60							†						
2 40	108 00		108 00					*		*						
8 00	156 00		156 00					*		*						
3 00	156 00		156 00					*		*						
3 00	156 00		156 00					*		*						
4 00	198 00		198 00					*		*						
8 00	144 00		144 00					*		*				5		

* Gives wages to parents and lives at home.

† Lives at home and pays no stated amount for board.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	18	U. S.	U. S.	s						52		
"	18	"	"	s						47	5	sick
Filer	17	Holland	Holland	s						52		
"	15	U. S.	Germany	s						52		
"	17	"	U. S.	s						49	3	sick
"	19	"	Holland	s						50	2	vacation
"	15	"	Germany	s						48	4	away from home
"	15	"	Holland	s						49	3	sick
ADOLPH LEITZELT, VALLEY CITY IRON WORKS.												
Foreman	24	U. S.	U. S.	m	2	2	1		3	52		
Machinist	22	Holland	Holland	m			1		1	52		
Foreman	52	U. S.	U. S.	m	5	1		1	3	52		
Molder	30	Germany	Germany	m	3	3	3		4	52		
Machinist	37	U. S.	U. S.	m	2	2			3	52		
"	32	Germany	Germany	m	1	1	1		2	52		
"	27	"	"	m	8	5	3		4	52	2	vacation
"	44	"	"	m				2	3	50	2	sick
"	37	"	"	m	1	1	1		2	52		
Boiler maker	32	"	"	m	1	1			2	52		
"	29	"	"	m	4	4	3		5	48	4	sick
"	36	"	"	m	5	5	3		6	52		
Machinist and draftsman	52	"	"	wt	2	2	1		2	52		
Machinist	28	"	"	m	4	4	1		5	52		
Machine hand	26	Holland	Holland	m	3	3			4	49	3	sickness of family
Machinist	39	Poland	Poland	m	4	4	2		5	52		
"	50	Austria	Austria	m	4	3	2		4	50	2	resting
"	38	Germany	Germany	m	6	5	3		6	52		
"	42	Switz.	Switz.	m					1	49	3	sick
"	26	Germany	Germany	m	1	1			2	52		
Helper in foundry	53	Holland	Holland	m	6	3			4	49	3	away from home
Molder	37	Germany	Germany	m	1	1			2	50	2	rest
"	30	Finland	Finland	m	3	3			4	49	3	sickness in family
Boiler maker	40	Germany	Germany	m	8	8	4		9	52		
"	63	"	"	m	5	1	1		2	52		
"	62	Russia	Russia	m	10	3	2		4	42	10	rest and sickness
"	42	Denmark	Denmark	m	1	1			2	52		
"	25	U. S.	Germany	m	1	1			2	51	1	holidays
"	27	"	U. S.	m	1	1			2	52		
Engineer	37	Germany	Germany	m	2	2			3	52		
Boiler maker	41	"	"	m	2	2	2		3	50	2	vacation
"	27	"	"	m	2	2	2		3	51	1	resting
Machinist	23	"	"	s						52		
Machine hand	26	Denmark	Denmark	s						50	2	vacation
"	19	Canada	Germany	s						44	8	no work
"	19	Sweden	Sweden	s						50	2	vacation
Book-keeper	18	U. S.	Germany	s						52		
Boiler maker	23	"	"	s						50	2	vacation
"	18	"	Holland	s						52		
"	26	Germany	Germany	s						48	4	sick
Machinist	17	U. S.	"	s						52		
Machine hand	14	Germany	"	s						50	2	resting
"	18	"	"	s						52		
Book-keeper	17	U. S.	"	s						52		
Machinist	19	Holland	Holland	s						52		

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total Annual income.		If owing home, its value.	If in debt on home, amt. 't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$5 40	\$280 80		\$280 80													
3 60	199 20		199 20													
5 40	280 80		280 80											9		
3 00	156 00		156 00													
4 80	235 20		235 20													
6 00	300 00		300 00													
3 60	172 80		172 80													
3 00	147 00		147 00													
18 00	986 00	\$120	1056 00	\$1800				\$300	\$9 00		\$2000	3	\$19 00			\$2500
10 50	546 00		546 00	500	\$1500	\$500								7		1800
18 00	936 00		936 00	500				200	12 00		2000					2000
15 00	750 00		750 00	550	1000			100				1	5 00	16		700
7 50	390 00		390 00	350					6 00			1	5 00			
11 00	572 00		572 00	500	1000			70						18		1800
15 00	750 00		750 00	450	900			300				1	5 00	17		2400
9 00	450 00		450 00	420					5 00					31		500
15 00	750 00		750 00	800	1500			150			1000	2	10 00	12		8000
7 50	390 00		390 00	350	800	275	\$25					1	5 00	6		1500
15 00	720 00		720 00	570	1000	300	150				1000	1	5 00	9		1800
15 00	750 00	250	1030 00	625	1800			400			1000	1	5 00	16		8000
18 00	936 00	100	1066 00	600	2000			300			1000	2	5 00	36		8000
13 50	702 00		702 00	600				30	8 00					9		700
13 50	661 50		661 50	551	2000	1000	100							3	\$28	650
15 00	780 00	100	880 00	600	1800	900	250							18		3000
10 50	525 00	160	685 00	585	900			100						25		1400
10 00	520 00		520 00	470	650	250	50				500	1	5 00	5		700
12 00	588 00		588 00	588					10 00					10	50	700
12 00	624 00		624 00	500	1200	600	100				500	1	5 00	8		1500
7 50	367 50	250	617 50	480				20	4 00					2	20	400
12 00	600 00		600 00	500				75	8 00					6		900
13 50	661 50		661 50	461				200	5 00					6		800
13 50	702 00	180	892 00	750	1500		100				1000	2	10 00	17		2800
12 00	624 00	35	659 00	490	1300			68			1000	1	5 00	24	100	2500
10 00	420 00	150	570 00	445	1200		125				1000	1	5 00	17	300	2000
15 00	780 00		780 00	585	2000			200						17	100	8500
12 00	612 00		612 00	512				100	7 00		1000	1	5 00			850
9 00	468 00		468 00	468					7 00							600
9 00	468 00		468 00	375	1500	500	75					1	3 00	7		2000
10 50	525 00		525 00	450	900									15		1400
9 00	459 00		459 00	450	700									5		1200
10 50	546 00		546 00					200		\$4 50				6		800
12 00	600 00		600 00					225		3 50				4	100	1400
5 50	242 00		242 00							3 50				1		
6 00	300 00		300 00							3 50						
5 00	280 00		280 00					100		2 50				3		300
12 00	600 00		600 00					300		4 00						1400
5 00	280 00		280 00							3 25						
6 75	324 00		324 00					75		3 50				4		300
6 00	312 00		312 00					*		*						
3 00	150 00		150 00					*		*				2		
6 00	312 00		312 00					*		*				3		
8 00	416 00		416 00					*		*						
6 00	312 00		312 00					*		*				17		

* Lives at home and gives wages to parents.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	21	Germany	Germany	s	—	—	—	—	—	30	—	first work in U. S.
"	24	"	"	s	—	—	—	—	—	33	—	"
"	44	"	"	s	—	—	—	—	—	49	3	laid off
Machine hand	20	U. S.	Ireland	s	—	—	—	—	—	52	—	"
Machinist	20	Germany	Germany	s	—	—	—	—	—	52	—	"
Helper	22	"	"	s	—	—	—	—	—	46	6	sick
Machinist	21	U. S.	U. S.	s	—	—	—	—	—	46	6	"
"	22	"	"	s	—	—	—	—	—	52	—	"
Teamster	19	Germany	Germany	s	—	—	—	—	—	47	5	sick
Pattern maker	18	"	"	s	—	—	—	—	—	50	2	resting
Helper	18	"	"	s	—	—	—	—	—	45	7	away
Teamster	20	"	"	s	—	—	—	—	—	47	5	sick
Machinist	17	Switz.	Switz.	s	—	—	—	—	—	52	—	"
Teamster	20	Germany	Germany	s	—	—	—	—	—	46	6	sick
Helper	19	"	"	s	—	—	—	—	—	52	—	"
Boiler maker	19	"	"	s	—	—	—	—	—	52	—	"
Helper	23	"	"	s	—	—	—	—	—	52	—	"
Machinist	22	"	"	s	—	—	—	—	—	48	4	sick
"	31	U. S.	U. S.	s	—	—	—	—	—	52	—	"
"	24	"	"	s	—	—	—	—	—	42	10	accident
Helper	21	Germany	Germany	s	—	—	—	—	—	48	4	sick
Boiler maker	22	"	"	s	—	—	—	—	—	52	—	"
Molder	23	"	"	s	—	—	—	—	—	26	—	first work in U. S.
"	20	Russia	Russia	s	—	—	—	—	—	46	6	sick
Pipe fitter	22	Germany	Germany	s	—	—	—	—	—	52	—	"
"	24	"	"	s	—	—	—	—	—	52	—	"
Machinist and engineer	35	"	"	m	2	2	2	—	3	52	—	"
Boiler maker	36	"	"	m	3	3	3	—	4	52	—	"
Molder	28	"	"	m	2	2	1	—	3	52	—	"
Machinist	24	"	"	m	1	1	—	—	2	52	—	"
"	27	"	"	m	2	2	—	—	3	52	—	"
Draftsman	36	U. S.	U. S.	m	3	3	3	—	4	52	—	"
Pattern maker	35	England	England	m	4	4	4	—	5	52	—	"
Machinist	25	U. S.	U. S.	m	1	1	—	—	2	52	—	"
Foreman	27	Austria	Austria	m	2	2	—	—	3	52	—	"
"	39	"	"	m	1	1	1	—	2	52	—	"
Molder	43	Holland	Holland	m	5	3	3	—	4	47	5	sick
Pipe cutter	50	U. S.	U. S.	m	2	1	—	—	2	52	—	"
Pipe fitter	35	England	England	m	2	2	—	—	1	52	—	"
"	28	Germany	Germany	m	2	2	—	—	3	48	4	sick
Teamster	34	"	"	m	2	2	2	—	3	52	—	"
"	37	Holland	Holland	m	5	4	4	—	5	52	—	"
"	42	Ireland	Ireland	m	5	3	3	—	4	52	—	"
Molder	36	Germany	Germany	m	4	3	3	—	4	52	—	"
"	48	Switz.	Austria	m	6	3	2	—	4	52	—	"
"	52	Holland	Holland	m	7	3	3	—	4	52	—	"
BUSS MACHINE WORKS.												
Foreman	38	U. S.	U. S.	m	3	3	3	—	4	52	—	"
Machinist	30	"	"	m	2	2	—	—	3	52	—	"
"	32	Germany	Germany	m	2	2	2	—	3	50	2	sick
"	33	Holland	Holland	m	3	3	1	—	4	52	—	"
"	30	U. S.	U. S.	m	1	1	1	—	2	49	3	sick
"	45	"	"	m	2	2	2	—	3	48	4	"
Fireman	29	Holland	Holland	m	1	1	—	—	2	49	3	"

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TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$225 00		\$225 00							†				8 mo	\$25	\$30
9 00	297 00		297 00							†				17		400
7 50	367 50		367 50							†		1	\$5 00	17		400
4 61	239 72		239 72					\$200		free				7		600
12 00	624 00		624 00					100		4 00		1	5 00	7		600
7 50	345 00		345 00							†				11		
12 00	552 00		552 00							†						
15 00	780 00		780 00							†						300
7 50	352 50		352 50					*		*				5		
6 75	337 50		337 50					*		*				17		
8 00	360 00		360 00					*		*				15		
7 50	352 50		352 50					*		*				17		
6 00	312 00		312 00					*		*				8		
7 50	345 00		345 00					*		*				12		
6 00	312 00		312 00					*		*				6		
12 00	624 00		624 00											14		
7 50	390 00		390 00					80		\$3 50				14		175
15 00	720 00		720 00					350		3 50				8		1800
15 00	780 00		780 00					300		4 00						360
15 00	630 00		630 00					120		5 00						
7 50	360 00		360 00					50		4 00				13		200
18 50	702 00		702 00					150		4 00		1	5 00	13		1000
12 00	312 00		312 00					2		4 00				7 mo		350
11 00	506 00		506 00					250		3 50				4		
9 00	468 00		468 00					150		3 50				12		
13 50	702 00		702 00					200		8 50		1	5 00	17		350
16 00	832 00	\$125	957 00	\$125	\$1200			300			\$3000	2	10 00	22		3500
15 00	780 00		780 00		630	1000		150						15		1700
15 00	780 00		780 00		620	1100		100						9		700
15 00	780 00		780 00		580	900		200						16		1400
15 00	780 00		780 00		500	1200		200						22		1800
22 00	1196 00	250	1446 00		680	2200		500			3000	2	18 00			3500
18 00	936 00		936 00		630	1800		300						19		2700
15 00	780 00		780 00		680	1200		100			2000					2500
18 00	986 00	100	1086 00		620			400	\$12 00		1500	1	5 00	11		2100
18 00	936 00		936 00		700			200			3000	3	20 00	23		2300
11 50	540 50	180	720 50		900			87	13 00			1	5 00	31		1500
12 00	624 00		624 00		624				12 00		1000					1000
15 00	780 00		780 00		2000			140			2000	1	5 00	10	45	3000
12 00	576 00		576 00		900						1000	1	5 00	17		1600
7 50	390 00		390 00		800									6	200	1000
7 50	390 00	120	510 00		1000						1000	1	5 00	9	300	1500
7 50	390 00	185	575 00		900									16	110	1400
15 00	780 00		780 00		600	1100		180						19		1600
15 00	780 00	160	940 00		680	1500	\$200	260						31		2100
15 00	780 00		780 00		690	1200		80						33		1800
18 00	986 00	150	1086 00		770			150	free		2000					3000
16 15	840 00		840 00		675	1500		150			1000					2300
15 00	750 00		750 00		650				8 00					16		800
15 00	780 00		780 00		680	800		100						8	25	1500
15 00	785 00		785 00		675	1000		50								1600
8 50	408 00		408 00		800			200								1200
7 50	367 50		367 50		800			200						10		800

* Gives wages to parents and lives at home. † Lives at home and pays no stated amount for board.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	57	U. S.	U. S.	m	2	2	1		3	52		
"	30	Germany	Germany	m	1				1	52		
"	23	U. S.	U. S.	m	1				1	52		
"	39	"	"	m	3	2	2		3	52		
"	47	Germany	Germany	m	5	5	4		6	55		
"	26	Holland	Holland	m	1				1	50	2	sick
Helper	52	U. S.	Germany	m	1				1	52		
Machinist	25	Germany	"	m	1	1			2	49	3	sickness in family
"	22	U. S.	U. S.	m	1				1	50	2	got married
"	39	"	Ireland	m	2	2	2		3	52		
Helper	53	Holland	Holland	m	4	3	3		4	52		
Machinist	30	U. S.	U. S.	m	2	2	1		3	49	3	sick
"	27	"	Germany	m	1	1	1		2	52		
Engineer	25	"	England	m	1	1	1		2	52		
Helper	35	Holland	Holland	m	2	2	1		3	50	2	visiting
Machinist	28	Germany	Germany	m	3	3			4	52		
"	54	U. S.	U. S.	m	2	2	1		3	52		
Foreman	33	Ireland	Ireland	m	2	3	2		4	52		
Helper	54	Holland	Holland	m	2	3	2		4	52		
Cupola tender	39	"	"	m	2	2			3	51	1	wife sick
Molder	27	U. S.	U. S.	m	1				1	52		
Helper	33	Holland	Holland	m	1	1	1		2	52		
"	39	Germany	Germany	m	2	3			4	52		
"	30	U. S.	U. S.	m	2	2	1		3	52		
Blacksmith	51	Canada	Ireland	m	4	4	2		5	52		
Molder	23	U. S.	U. S.	m	1				1	52		
"	25	"	"	m	1	1			2	49	3	sick
Blacksmith	26	Germany	Germany	m	2	2			3	52		
Helper	27	"	"	m	3	3			4	52		
"	21	Holland	Holland	s	3				4	52		
Molder	22	Germany	Germany	s						50	2	sick
Teamster	22	Ireland	Ireland	s						52		
Molder	28	U. S.	U. S.	s				2	2	52		
Machine hand	18	"	"	s						47	5	sick
Machinist	17	"	Germany	s						52		
Machine hand	18	"	"	s						49	3	sick
"	18	"	U. S.	s						52		
Machinist	24	"	"	s				1	1	52		
Molder	18	"	"	s						50	2	sick
"	13	"	"	s						50	2	vacation
"	21	"	"	s						50	2	sick
"	21	"	"	s						49	3	sick
"	24	Holland	Holland	s						52		
"	22	"	"	s						52		
Machinist	29	U. S.	U. S.	s						52		
"	24	"	Ireland	s						52		
"	20	"	U. S.	s						48	4	sick
Draftsman & Machinist	21	"	"	s						44	8	no work
Pattern maker	46	England	England	s						52		
Machine hand	19	U. S.	U. S.	s						52		
Machinist	19	"	"	s						52		
"	22	"	"	s						51	1	vacation
Machine hand	19	"	"	s						50	2	sick

TABLE No. 3.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am t.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness.			
45 00	750 00	160	910 00	675				75	10 00							3000
13 50	702 00		702 00	480				75	7 00							1000
9 00	468 00		468 00	480					4 00		1000	1	3 00	9	20	700
16 50	858 00		858 00	650				180	8 00							1500
16 00	832 00	80	912 00	725	1800		100	75			1000	1	5 00	23	25	2900
13 50	675 00		675 00	600				50	9 00					14	15	600
8 50	442 00		442 00	440					8 00							450
12 00	588 00		588 00	580					6 00							500
12 90	645 00		645 00	645					6 00			1	5 00	7		370
15 00	780 00		780 00	700				60	10 00							600
7 50	390 00	180	570 00	500	800	200	20							6	65	1000
13 50	661 50		661 50	600	1000	300	50				1000					1100
18 00	676 00		676 00	600				25	7 00		1000					700
13 50	702 00		702 00	640	1000		60				2000	1	5 00			1600
9 00	450 00		450 00	440					5 00			1	5 00	24		500
12 00	624 00		624 00	570	900	500	50				2000			10	40	850
12 00	624 00		624 00	620					10 00							500
18 00	936 00	220	1156 00	600				400	free			1	5 00	12		4000
7 50	390 00	100	490 00	490	700	200								6	50	800
9 00	459 00		459 00	390	800	600								18		700
15 00	780 00	160	940 00	700				225	10 00			1	15 00			2800
7 50	390 00		390 00	370	700	250	20							6		750
9 00	468 00		468 00	460	600	200								8	30	650
7 50	390 00		390 00	390					6 00							350
15 00	780 00		780 00	650	1000		100	20						18	60	1700
13 50	702 00		702 00	600	800	150	100				2000					950
12 00	588 00		588 00	588	900	100			5 00		2000	1	5 00	13		1200
10 50	546 00		546 00	540					6 00			1	5 00	11		400
10 00	520 00		520 00	500								1	5 00	5		500
7 50	390 00		390 00					50		4 00						80
9 00	450 00		450 00					100		4 00		1	5 00	6		170
6 00	312 00		312 00						3 50					6		
15 00	790 00	140	930 00	600				300	10 00							2000
3 50	164 50		164 50					*		*						
9 00	468 00		468 00					*		*						
6 00	294 00		294 00					*		*						
3 50	182 00		182 00					*		*						
15 00	790 00	75	865 00	620				200	†		1000					600
4 50	225 00		225 00					20		2 00						
4 50	225 00		225 00							3 50						
15 00	750 00		750 00					300		4 00						540
9 00	441 00		441 00					125		4 00						170
15 00	790 00		790 00					150		6 00				18		500
15 00	790 00		790 00					300		5 00				17		700
8 50	702 00		702 00							4 00						250
9 00	468 00		468 00							4 00						175
9 00	432 00		432 00					75		3 50						100
12 00	528 00		528 00							4 00						60
14 00	728 00		728 00					100		5 00	2000	1	5 00	6	40	1000
7 50	390 00		390 00							4 00						
9 00	468 00		468 00					100		3 00						130
13 50	698 50		698 50					200		4 00						500
5 00	250 00		250 00							3 00						

* Gives wages to parents and lives at home.

† Lives at home and supports family.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist.....	24	Holland	Holland	s	—	—	—	—	—	50	2	sick
Stenographer.....	20	U. S.	U. S.	s	—	—	—	—	—	52	—	—
WM. T. POWERS & SON.												
Core maker.....	28	Ireland	Ireland	s	—	—	—	1	1	50	2	slack work
Machinist.....	23	U. S.	Germany	s	—	—	—	—	—	52	—	—
Molder.....	21	France	France	s	—	—	—	—	—	47	—	—
Engineer.....	28	U. S.	U. S.	s	—	—	—	—	—	52	5	drunk
Molder.....	17	"	"	s	—	—	—	—	—	52	—	—
Helper.....	19	"	"	s	—	—	—	—	—	44	8	slack work
Machinist.....	21	"	"	s	—	—	—	—	—	52	—	—
Molder.....	21	"	Holland	s	—	—	—	—	—	50	2	sick
Pattern maker.....	28	"	Germany	s	—	—	—	—	—	51	1	vacation
Teamster.....	24	Germany	"	s	—	—	—	—	—	52	—	—
Pattern maker.....	52	Canada	"	m	4	2	2	—	3	52	—	—
Molder.....	51	U. S.	"	m	5	3	2	—	4	49	3	sickness in family
".....	36	Germany	"	m	3	3	2	—	4	51	1	resting
Steam fitter.....	28	U. S.	U. S.	m	2	2	—	—	3	50	2	wife sick
Machinist.....	44	"	England	m	4	3	3	—	4	52	—	—
Blacksmith.....	34	"	Holland	m	1	1	—	—	2	50	2	vacation
Machinist.....	52	"	U. S.	m	4	3	3	—	4	52	—	—
Pattern maker.....	39	"	Germany	m	3	3	2	—	4	50	2	vacation
Machinist.....	43	"	"	m	2	2	2	—	3	52	—	—
Helper.....	36	"	Sweden	m	2	3	2	—	4	46	6	sickness in family
Steam fitter & machinist	39	Germany	Germany	m	1	1	1	—	2	52	—	—
Machinist.....	23	U. S.	U. S.	m	2	2	—	—	3	50	2	vacation
".....	50	Austria	Austria	m	3	2	2	—	3	49	3	sickness
".....	41	U. S.	U. S.	m	4	4	4	—	5	52	—	—
".....	38	Germany	Germany	m	2	2	1	—	3	50	2	sick
".....	32	U. S.	"	m	1	1	—	—	2	52	—	—
Foreman.....	40	Austria	Austria	m	2	3	1	—	3	52	—	—
Book-keeper.....	30	U. S.	U. S.	m	1	1	—	—	2	52	—	—
Foreman.....	56	"	"	m	3	2	1	—	3	52	—	—
Helper.....	35	Germany	Germany	m	4	4	2	—	5	52	—	—
Molder.....	34	U. S.	U. S.	m	1	1	—	—	2	48	4	drunk
Foreman.....	30	England	England	m	1	1	—	—	2	50	2	vacation
Cupola tender.....	34	Germany	Germany	m	4	4	2	—	5	52	—	—
Laborer.....	46	Holland	Holland	m	—	—	—	—	1	49	3	sickness in family
Helper.....	35	U. S.	Ireland	m	3	3	1	—	4	45	7	slack work
Blacksmith.....	45	"	Germany	m	4	3	2	—	4	52	—	—
Molder.....	35	"	"	m	3	3	1	—	4	50	2	sick
".....	27	"	U. S.	m	2	2	—	—	3	52	—	—
Machinist.....	45	Canada	Scotland	m	3	3	3	—	4	51	1	death of mother
".....	38	U. S.	U. S.	m	3	3	2	—	4	52	—	—
THE BELKNAP WAGON AND SLEIGH CO.												
Wood worker.....	19	U. S.	Germany	s	—	—	—	—	—	52	—	—
Blacksmith.....	33	Holland	Holland	s	—	—	—	—	—	52	—	—
Wood worker.....	38	U. S.	U. S.	s	—	—	—	—	—	48	4	sick
".....	22	Ireland	Ireland	s	—	—	—	—	—	49	3	away
".....	25	U. S.	U. S.	s	—	—	—	—	—	49	3	sick

TABLE No. 3.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$750 00		\$750 00					\$200		\$4 00				7	\$800	
15 00	780 00		850 00					400		4 00					10000	
6 00	812 00	\$70	812 00							4 00						
12 00	600 00		600 00	\$600						†				16		
12 00	624 00		624 00							†						
12 00	624 00		624 00							5 00						
15 00	705 00		705 00							4 00						
10 00	520 00		520 00					175		5 00				9	500	
4 00	208 00		208 00							3 50						
9 00	396 00		396 00					35		3 50					60	
6 00	312 00		312 00							2 00						
7 50	375 00		375 00					400		3 00						
15 00	763 00		763 00							3 50					80	
7 50	390 00		390 00					45		3 75				18	250	
18 00	988 00	144	1080 00	680	\$2200		\$250				\$3000	1	\$5 00	28	\$300	4800
14 00	698 00		698 00	580	1800		140				1000	1	5 00		2100	
16 00	816 00		816 00	590	1500		180	30			2000	1	5 00	19	2300	
12 00	600 00		600 00	500				75	\$8 00						850	
15 00	780 00		780 00	600	1000		150				1000				1800	
12 00	600 00		600 00	500	1300		100								1500	
15 00	780 00		780 00	560	1500		100	75			2000				3000	
16 00	800 00		800 00	580	1700		200				2000				8000	
18 50	702 00		702 00	500	2500	\$150	150				1000				8000	
7 50	345 00		345 00	320	1200										1800	
12 00	624 00		624 00	580					6 00		1500	1	5 00	16	800	
13 25	662 50		662 50	510	2000	850	100				2000				2500	
15 00	785 00		785 00	550	2000		150				1000	1	5 00	25	2700	
15 00	780 00		780 00	520	1800	700	200								2000	
14 75	737 50		737 50	520	1200		200					1	5 00	21	2000	
15 00	780 00		780 00	490	3000	100	300								4000	
18 00	996 00		996 00	890	1800		400	100			2000			88	2500	
9 00	468 00		468 00	350					6 00						350	
27 00	1404 00	400	1804 00	1000	3600		200				2000				9000	
9 00	468 00		468 00	415	1200									23	1800	
16 50	792 00		792 00	520					5 00						450	
20 00	1000 00	150	1150 00	600				350	10 00		2000	1	5 00	9	2500	
12 00	624 00		624 00	545	2000		75							12	2500	
9 00	441 00		441 00	460	1200									16	1900	
9 00	405 00		405 00	405					5 00						600	
14 75	767 00		767 00	540	4000	800	200					1	5 00		4800	
18 50	675 00		675 00	525	1800		150								3000	
15 00	780 00		780 00	580	1200		200				2000				2000	
12 00	612 00		612 00	512	1600		100							18	2300	
18 50	702 00		702 00	550	1200	100	150								2000	
9 00	468 00		468 00					*		*						
9 00	468 00		468 00				200			3 00				9	75	850
12 00	576 00		576 00				300			4 00					1000	
18 50	661 50	\$150	811 50				400			4 00		1	5 00	16	1700	
18 50	661 50		661 50				800			4 00					3500	

* Gives wages to parents and lives at home.
† Lives at home and supports family.

† Lives at home and pays no stated amount for board.

TABLE No. 3.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Stenographer.	30	U. S.	U. S.	s						52		
Foreman.	36			s						52		
Blacksmith.	32	Canada.	Canada.	m	2	2	2		3	46	6	sick and out of work
"	32	U. S.	U. S.	m	1	1			2	50	2	rest
"	38		France.	m	3	3	1		4	44	8	slack work
Wood worker.	50	"	U. S.	m	3	3	1		4	52		
"	42	Holland.	Holland.	m	7	7		1	9	52		
"	43		Ireland.	m	7	6	5		7	52		
"	30	U. S.	U. S.	m	1	1			2	48	4	sick and no work
"	42			m					1	50	2	resting
"	48	Canada.	Canada.	m	2				1	49	3	sick
Helper.	60	Germany.	Germany.	m					1	40	12	sick and no work
Blacksmith.	49	Holland.	Holland.	m	5	6	3		7	52		
"	34	Sweden.	Sweden.	m	8	8	2		4	49	3	resting
"	39	Holland.	Holland.	m	6	6	3		7	48	4	sickness
"	32	"	"	m	2	2			3	52		
"	45	"	"	m	2	2			3	48	4	sick
"	32	U. S.	U. S.	m	4	4			1	44	8	no work
"	39	Sweden.	Sweden.	m	4	4	3		5	52		
Wood worker.	65	U. S.	U. S.	m	2				1	34	18	sickness
"	27	"	Germany.	m	3	3	1		4	52		
"	41	Germany.	Germany.	m	4	4	2		4	52		
"	45	Holland.	Holland.	m	5	5	3		4	50	2	rest
"	52	U. S.	U. S.	m	1	1			2	52		
"	31	"	"	m	2	2			3	50	2	vacation
Painter.	32	Holland.	Holland.	m	4	4	2		5	52		
"	33	Canada.	Germany.	m	5	5	4		6	47	5	sickness & no work
"	34	Holland.	Holland.	m					1	49	3	sick
Salesman.	31	U. S.	U. S.	m	3	3	1		4	49	3	sickness in family
Engineer.	41	"	"	m					1	52		
BUTTERWORTH & LOWE.												
Pattern maker.	16	"	"	s						44	8	no work
Molder.	16	Germany.	Germany.	s						44	8	"
"	19	Austria.	Austria.	s						52		
Teamster.	23	Ireland.	Ireland.	s						52		
Molder.	18	U. S.	U. S.	s						52		
Core maker.	27	"	Ireland.	s						52		
Blacksmith.	34	Sweden.	Sweden.	s						52		
Machine hand.	19	U. S.	U. S.	s						45	4	away from home
Machinist.	21	"	"	s						52		
"	20	Ireland.	Ireland.	s						50	2	out of town
Book-keeper.	30	England.	England.	s						52		
Molder.	27	Germany.	Germany.	m					1	52		
"	27	U. S.	"	m	2	2			3	48	4	not answered
"	41	Canada.	Scotland.	m	1	1			2	52		
"	26	Germany.	Germany.	m	2	2			3	45	4	sick
"	30	U. S.	U. S.	m	1	1			2	52		
Helper.	34	Germany.	Germany.	m	4	4	2		5	52		
Carpenter.	65	Holland.	Holland.	wr	4	1			1	52		
Pattern maker.	57	U. S.	U. S.	wr						46	6	no work
Foreman.	45	"	Ireland.	m	2	2	1		3	52		
Pattern maker.	38	England.	England.	m	2	2	2		3	52		
Blacksmith.	40	"	"	m	4	4	4		5	52		

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other source.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 00	\$320 00		\$320 00					\$300 00		\$3 00						\$800
25 00	1800 00		1800 00					600		4 50						2000
9 00	414 00		414 00	\$414					\$8 50					13		600
13 50	675 00		675 00	400	\$1000	\$600	\$160									1500
15 50	594 00		594 00	400	800		120					1	\$5 00			1400
10 50	546 00	\$80	626 00	392	1200			80								2000
12 00	624 00		624 00	624	1000									17		1900
12 00	624 00	116	734 00	560	860			140						25		1500
9 00	432 00	120	552 00	407				145	3 00							2800
12 00	600 00		600 00	420	1000		120									2000
13 00	637 00	180	817 00	437	900		200							22		1700
7 50	300 00		300 00	300	700									7	\$500	1300
9 00	464 00	200	668 00	450	950			200						23		1800
14 00	686 00		686 00	436				250	6 00					3	200	780
9 00	432 00		432 00	272	800			160						8	120	1400
9 00	468 00		468 00	318	900			150						5	100	1800
13 50	648 00	140	788 00	488	1000			280						22		2500
9 00	896 00		896 00	360	360				5 00							700
13 50	702 00		702 00	550	900			100						19		1800
10 50	357 00	96	453 00	350					8 00							600
10 00	520 00		520 00	520	900	200										1600
15 00	780 00		780 00	650	2000		120				\$2000			12	10	3000
12 00	600 00		600 00	450	1000			125				1	5 00	18	125	1800
13 50	702 00		702 00	600	1000		100									2000
15 00	750 00		750 00	550	1200		200				1000					2400
12 00	624 00		624 00	500	1200		100							15		2200
15 00	705 00		705 00	600	1500	800	100					1	5 00	9	60	2000
10 50	514 50		514 50	514	1100									16		1800
12 00	588 00		588 00	520	1000			20			3000	1	15 00			1800
18 00	936 00		936 00	600	1800			180								2800
3 00	132 00		132 00					*		*						
4 50	198 00		198 00					*		*				9		
10 50	548 00		548 00					*		*				18		
7 50	390 00		390 00							4 00				5		50
7 50	390 00		390 00					125		2 00						125
10 50	546 00		546 00					300		4 00						1200
10 00	520 00		520 00					100		4 00				6	45	450
6 00	228 00		228 00							2 50						
12 00	624 00		624 00					150		5 00						300
7 50	375 00		375 00					25		3 00				4		100
34 61	1799 72	240	2039 72					1000		5 00				20		5000
15 00	780 00	210	990 00	580	200			400	8 50			1	6 00	22		3500
15 00	720 00		720 00	600				100	7 00			1	5 00			1100
16 50	858 00		858 00	580				250	6 00			1	5 00	20		800
15 00	720 00		720 00	550	1200		200	15			1000	1	5 00	18		1800
15 00	780 00	72	852 00	480	800		200	150	7 00			* 1	5 00			1500
7 50	390 00		390 00	390	500									8		800
10 50	846 00		846 00	540	1500	500								19½	70	1800
18 50	621 00		621 00							4 50						1000
21 00	1092 00		1092 00	600	1500	500	400	75			6800	1	15 00			1900
18 00	936 00		936 00	850					10 00					12	100	1200
16 00	682 00		682 00	700				100	12 00					28		2000

* Lives at home and gives wages to parents.

TABLE No. 3.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Blacksmith	35	U. S.	Germany	m	—	—	—	—	1	52	—	—
Machinist	40	Russia	Russia	m	3	5	4	—	6	52	—	—
"	62	U. S.	U. S.	m	3	—	—	—	1	50	2	sick
"	25	Sweden	Sweden	m	1	1	—	—	2	49	3	—
"	44	Germany	Germany	m	5	5	5	—	6	52	—	—
"	40	Russia	Russia	m	3	3	3	—	4	52	—	—
"	34	Norway	Norway	m	3	3	—	—	4	52	—	—
"	25	U. S.	U. S.	m	1	1	—	—	2	52	—	—
"	34	England	England	m	3	3	3	—	4	52	—	—
"	37	Scotland	Scotland	m	4	4	2	—	5	52	—	—
Foreman	31	Canada	Canada	m	2	2	—	—	3	52	—	—
	46	Germany	Germany	m	8	3	1	—	4	52	—	—
GRAND RAPIDS MFG. AND IMPLEMENT CO.												
Molder	20	U. S.	England	s	—	—	—	—	—	47	5	slack work
Laborer	23	"	Germany	s	—	—	—	—	—	47	5	"
Helper	19	"	Holland	s	—	—	—	—	—	48	4	"
Molder	21	Poland	Poland	s	—	—	—	1	1	52	—	—
	23	Germany	Germany	s	—	—	—	—	—	48	4	slack work
Billing clerk	28	U. S.	U. S.	s	—	—	—	—	—	52	—	—
Molder	24	Holland	Holland	m	2	2	—	—	3	49	3	sick
Machine hand	45	U. S.	U. S.	m	4	8	2	—	4	52	—	—
Wood worker	71	"	"	wr	2	2	—	—	2	47	5	sick
Engineer	38	Canada	"	m	1	1	—	—	2	52	—	—
Wood bender	60	Holland	Holland	m	4	—	—	—	1	52	—	—
Wood worker	65	Canada	U. S.	m	3	—	—	—	1	50	2	sick
Pattern maker	60	U. S.	"	m	10	8	3	—	5	52	—	—
Painter	27	"	"	m	1	1	—	—	2	52	—	—
	32	Germany	Germany	m	3	3	2	—	4	52	—	—
Wood worker	31	U. S.	Canada	m	2	2	1	—	3	49	3	slack work
Book-keeper	25	"	U. S.	m	—	—	—	—	1	52	—	—
Shipping clerk	29	"	"	m	1	1	—	—	2	52	—	—
Foreman	57	Canada	Canada	m	3	2	—	—	3	52	—	—
Model and pattern maker	43	U. S.	U. S.	m	6	6	5	—	7	52	—	—
Cupola tender	38	Germany	Germany	m	4	4	2	—	5	52	—	—
Machine hand	33	"	"	m	3	3	1	—	4	52	—	—
Machinist	23	U. S.	Canada	m	—	—	—	—	1	52	—	—
Helper	29	Holland	Holland	m	4	4	2	—	5	52	—	—
Machinist	30	U. S.	Germany	m	2	2	1	—	3	48	4	slack work
Foreman	42	"	U. S.	m	2	2	2	—	3	52	—	—
Molder	27	"	"	m	2	2	—	—	3	52	—	—
GRAND RAPIDS WHEELBARROW CO.												
Helper	17	U. S.	Holland	s	—	—	—	—	—	42	10	sickness at home
"	18	"	U. S.	s	—	—	—	—	—	46	6	at home
"	17	"	Sweden	s	—	—	—	—	—	40	12	resting
Wood worker	46	Poland	Poland	s	—	—	—	—	—	50	2	at school
	22	"	"	s	—	—	—	—	—	52	—	—
Laborer	23	Holland	Holland	s	—	—	—	—	—	48	4	sick
Helper	20	Germany	Germany	s	—	—	—	—	—	47	5	"
Blacksmith	22	U. S.	U. S.	s	—	—	—	—	—	52	—	—
"	28	Holland	Holland	m	2	2	—	—	3	52	—	—
"	26	U. S.	"	m	1	1	—	—	2	48	4	sick

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
39 00	\$468 00	-----	\$468 00	\$450	-----	-----	-----	-----	\$5 00	-----	-----	1	\$10 00	-----	-----	\$350
15 00	780 00	-----	780 00	600	\$2300	\$350	\$75	-----	-----	-----	\$1500	2	10 00	-----	-----	3100
15 00	750 00	-----	750 00	520	3500	200	-----	-----	-----	-----	-----	-----	-----	20	-----	4800
12 00	588 00	-----	588 00	580	-----	-----	-----	-----	7 00	-----	-----	-----	-----	5	\$20	400
13 50	702 00	-----	702 00	650	1500	-----	-----	-----	-----	-----	2000	-----	-----	19½	-----	2500
15 00	780 00	-----	780 00	700	-----	-----	-----	\$50	10 00	-----	-----	-----	-----	16	20	1200
7 25	\$77 00	-----	377 00	375	-----	-----	-----	-----	4 00	-----	-----	-----	-----	1½	100	300
7 50	390 00	-----	390 00	390	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	700
13 50	702 00	-----	702 00	600	-----	-----	-----	60	5 00	-----	2000	-----	-----	12	-----	800
15 00	780 00	-----	780 00	650	900	-----	100	-----	-----	-----	-----	-----	-----	14	-----	2100
14 40	748 80	-----	748 80	640	600	-----	100	-----	-----	-----	-----	-----	-----	8	-----	1100
28 00	1196 00	-----	1196 00	800	2700	800	300	50	-----	-----	4000	-----	-----	22	-----	8400
9 00	423 00	-----	423 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
9 00	428 00	-----	428 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
6 00	288 00	-----	288 00	-----	-----	-----	-----	50	-----	\$3 00	-----	-----	-----	-----	-----	75
13 00	624 00	-----	624 00	500	-----	-----	-----	100	4 00	-----	-----	-----	-----	-----	-----	500
10 00	480 00	-----	480 00	-----	-----	-----	-----	150	-----	4 00	-----	-----	-----	14	-----	450
10 00	520 00	\$40	560 00	-----	-----	-----	-----	175	-----	4 50	-----	-----	-----	-----	-----	600
15 00	735 00	-----	735 00	585	1200	-----	200	-----	-----	-----	1000	1	5 00	17	-----	1600
11 25	585 00	180	745 00	600	-----	-----	-----	100	8 00	-----	-----	-----	-----	-----	-----	1200
12 80	601 60	120	721 60	-----	-----	-----	-----	120	-----	5 00	-----	-----	-----	-----	-----	1200
10 50	546 00	-----	546 00	540	900	-----	-----	-----	-----	-----	-----	-----	-----	34	-----	1500
7 50	390 00	-----	390 00	890	1000	-----	-----	-----	-----	-----	-----	-----	-----	15	45	1600
9 00	450 00	120	570 00	480	8000	-----	-----	-----	-----	-----	-----	-----	-----	20	800	6000
10 68	555 36	-----	555 36	550	3000	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3800
12 00	624 00	-----	624 00	600	800	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1100
13 50	702 00	-----	702 00	600	1200	-----	100	-----	-----	-----	-----	-----	-----	24	-----	1800
12 00	588 00	-----	588 00	588	-----	-----	-----	-----	8 00	-----	1000	-----	-----	-----	-----	600
18 00	986 00	-----	986 00	625	-----	-----	-----	300	10 00	-----	-----	-----	-----	-----	-----	2000
9 00	468 00	-----	468 00	465	-----	-----	-----	-----	6 00	-----	500	-----	-----	-----	-----	400
18 00	986 00	216	1152 00	700	2000	-----	-----	425	-----	-----	-----	-----	-----	25	40	5500
9 00	468 00	60	528 00	525	900	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2100
9 00	468 00	-----	468 00	460	800	800	-----	-----	-----	-----	-----	-----	-----	6½	10	350
7 50	390 00	-----	390 00	390	-----	-----	-----	-----	5 00	-----	-----	-----	-----	6	40	400
12 00	624 00	-----	624 00	575	-----	-----	-----	45	12 00	-----	-----	-----	-----	-----	-----	1100
9 00	468 00	-----	468 00	460	-----	-----	-----	-----	5 00	-----	-----	-----	-----	25	-----	500
10 50	504 00	-----	504 00	500	800	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1200
18 00	936 00	180	1116 00	600	1500	-----	300	200	-----	-----	1800	-----	-----	-----	-----	8000
9 00	468 00	-----	468 00	460	-----	-----	-----	-----	5 00	-----	-----	-----	-----	-----	-----	360
4 50	186 00	-----	186 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
4 50	207 00	-----	207 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
3 00	120 00	-----	120 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
3 00	150 00	-----	150 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
7 50	390 00	-----	390 00	-----	-----	-----	-----	100	-----	3 50	-----	-----	-----	6	-----	230
7 50	360 00	-----	360 00	-----	-----	-----	-----	70	-----	8 50	-----	-----	-----	4	25	250
6 00	282 00	-----	282 00	-----	-----	-----	-----	-----	8 50	-----	-----	-----	-----	2	-----	350
9 00	468 00	-----	468 00	-----	-----	-----	-----	100	3 50	-----	-----	-----	-----	-----	-----	-----
15 00	780 00	-----	780 00	600	1200	-----	175	-----	-----	-----	-----	1	5 00	15	-----	1500
13 50	648 00	-----	648 00	588	1400	180	60	-----	-----	-----	-----	-----	-----	-----	-----	1800

* Lives at home and gives wages to parents.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Helper	38	Sweden	Sweden	m	4	4	3		5	52		
Wood worker	60	U. S.	U. S.	m	5	3	2		8	50	2	sick
"	52	Germany	Germany	wr	5	3	2		8	52		
"	31	Holland	Holland	m	3	3	2		4	49	3	sick
"	45	Poland	Poland	m	5	3	2		4	49	3	"
Laborer	40	"	"	m	4	4	3		5	50	2	"
Helper	24	Ireland	Ireland	m	1	1			2	50	2	sickness
Wood worker	46	Sweden	Sweden	m	6	3	2		4	45	4	sick
"	28	U. S.	U. S.	m	2	2			3	52		
"	53	"	"	m	3	3	2		4	52		
"	46	"	"	m	5	3	2		4	52		
"	58	Holland	Holland	m	4	4	4		5	52		
"	55	U. S.	U. S.	m	4				1	46	7	sick
Laborer	46	Holland	Holland	wr	3	2			2	46	6	sickness in family
Wood worker	26	U. S.	U. S.	m	2	2			3	52		
Laborer	40	"	"	m	2	2	1		3	52		
Superintendent	42	"	"	wr	4	4	4	1	5	52		
THE FOX MACHINE CO.												
Helper	15	"	U. S.	s						42	10	no work
Machine hand	16	"	England	s						44	8	"
Machinist	19	"	"	s						42	10	"
"	23	"	U. S.	s						44	8	"
Stenographer	20	"	Holland	s						52		
Machinist	23	"	U. S.	s						49	3	rest
Book-keeper	19	"	"	s						46	6	no work
Molder	21	"	"	s						45	7	"
"	28	Sweden	Sweden	s						46	6	sick and no work
Helper	20	U. S.	U. S.	s						44	8	no work
Molder	18	"	"	s						46	6	"
Machinist	34	"	"	m					1	52		
"	39	"	"	m	2	2	2		3	49	4	sick and visiting
"	23	Canada	Canada	m	1	1			2	52		
"	31	Cuba	Scotland	m	2	2			3	49	3	sick
Wood worker	41	Canada	U. S.	m	3	3	1		4	48	4	"
Pattern maker	34	U. S.	"	wr	1	1			1	44	8	sickness in family
Engineer	44	"	"	m	5	4	3		5	44	8	sick
Molder	32	"	"	m	3	3	3		4	50	2	rest
"	36	Canada	Canada	m	2	2	1		3	46	6	sickness
Melter	29	Holland	Holland	m	4	4	2		5	48	4	"
Molder	47	U. S.	U. S.	m	2	2	2		3	45	7	sick
"	48	"	"	m	3	3	3		4	42	10	"
Foreman	36	"	"	m					1	50	2	sickness
HENRY J. HARTMAN.												
Molder	17	"	Holland	s						50	2	vacation
Machinist	20	Holland	"	s						42	10	looking for work
"	29	U. S.	Germany	s				1	1	42	10	out of work
"	20	Germany	"	s						26		first work in U. S.
Molder	19	U. S.	U. S.	s						47	5	sickness
Teamster	35	"	Canada	m	1	1	1		2	50	2	"
Laborer	23	Canada	"	m	1	1			2	43	4	"
Machinist	26	U. S.	U. S.	m	1	1	1		2	52		
Molder	25	Germany	Germany	m	2	2	1		3	32	20	sickness
"	29	U. S.	"	m	1	1			2	46	6	sick

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount saved aside from payments on home.	Amount paid on home during the year.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$468 00		\$468 00	\$468	\$800									18	\$35	\$1200
18 50	675 00	\$140	815 00	815	550	2000					\$2000					5000
12 00	624 00	96	720 00	506	1000		\$100	\$50			2000	1	\$5 00	18	75	2500
12 00	588 00		588 00	880			90							9	40	400
10 50	514 50		514 50	514					\$7 00					6		350
9 00	450 00	150	600 00	475	800	\$400	140				1000			6	175	900
9 00	450 00		450 00	450					5 00					4	20	350
10 50	504 00	120	624 00	564	900		60							19	100	1400
12 00	624 00		624 00	560	800	200	120									1000
18 50	702 00		702 00	700					6 00		1000					800
13 50	702 00	160	862 00	582	1600	240	280				2000					2000
15 00	780 00	15	795 00	675				120	8 00		2000	1	5 00	16		850
9 00	405 00	96	501 00	400	1200		90				2000					1800
7 50	845 00	180	525 00	570					6 00			1	5 00	21	25	800
15 00	780 00	76	856 00	600	800	200	250				2000					2100
9 00	468 00	200	668 00	600				60	7 00		100					700
18 00	936 00		936 00	680	1000	400	250									1250
3 00	126 00		126 00					*								
3 30	145 20		145 20					*								
4 50	189 00		189 00					*								
8 00	132 00		132 00					†								500
8 00	416 00		416 00					†								
15 00	735 00	100	835 00						\$4 00	1000	1	10 00				1200
9 00	414 00		414 00						4 00							400
9 00	405 00		405 00						3 50							400
15 00	690 00		690 00				800		3 50					10		1000
7 50	330 00		330 00				100		3 00							150
7 50	845 00		345 00				50		3 00							
15 00	780 00	100	880 00						8 00	2000	1	10 00				800
15 00	720 00		720 00	400	1500											2200
13 50	702 00		702 00	350	1200	1000								15		800
16 50	808 50	480	1288 50	600	3000				10 00					23		3500
13 50	648 00	800	948 00	600	1200					2000				20		8000
18 00	792 00		792 00						6 00	8000						1800
9 00	396 00	96	492 00	400					10 00							500
12 50	625 00		625 00	450					7 00							600
18 00	628 00	21	849 00	600					10 00		2000	1	10 00	15		1500
11 00	528 00		528 00	428	900	300	100							14		1500
13 50	607 50	96	703 50	600	2000			60								2800
15 00	630 00	112	742 00	520	800			140								1800
16 75	837 50	200	1037 50	700				300	10 00							2400
6 00	300 00		300 00					*								
9 00	378 00		378 00											19		
18 00	546 00		546 00	320					8 00							1200
10 00	260 00		260 00					50	4 00					8 mo	100	200
9 00	423 00		423 00						8 50							
7 00	350 00		350 00													600
8 00	384 00		384 00	300				70	6 00					16		500
13 50	702 00		702 00	550	1200		150			2000						2000
15 00	480 00		480 00	480					7 00		1000	1	5 00	18		700
15 00	690 00	120	810 00	360	1200	750	400					1	5 00			2200

* Gives wages to parents and lives at home.

† Lives at home and pays no stated amount for board.

TABLE NO. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	27	U. S.	U. S.	m	2	2			2	46	6	sickness in family
Helper	21	"	"	m	4	4			4	42	10	sick and out of work
Molder	28	"	Ireland	m	4	4			4	44	4	sickness in family
"	27	"	Germany	m	1	1			1	44	3	"
"	28	"	U. S.	m	1	1			1	49	3	sick
F. HARTMANN & Co.												
Machine hand	15	Holland	Holland	s						50	2	sick
Helper	17	"	"	s						49	3	no work
Machine hand	17	U. S.	U. S.	s						52		
"	18	Holland	Holland	s						44	5	sick and no work
Machinist	22	U. S.	U. S.	s						37	15	no work
"	24	"	"	s						43	0	"
"	25	Holland	Holland	s						47	5	"
"	29	Canada	Ireland	s						51	1	rest
"	35	U. S.	U. S.	m	4	4	3		5	44	6	no work & sickness
"	30	"	"	m	3	3	2		4	40	12	no work
THE COLBY WAGON CO.												
Helper	18	Germany	Germany	s						44	8	slack work
Painter	19	U. S.	U. S.	s						53		
Wood worker	20	"	"	s						50	2	vacation
Blacksmith	20	England	England	s						48	6	sick and out of town
"	21	U. S.	Canada	s						52		
"	41	Germany	Germany	m	4	4	3		5	52		
"	38	U. S.	U. S.	m	4	4	4		5	52		
Wood worker	30	Holland	Holland	m	3	3	1		4	52		
Helper	27	U. S.	U. S.	m	2	2			3	52		
Wood worker	45	"	Germany	m	4	3	2		4	52		
"	35	Holland	Holland	m	3	3	3		4	52		
Painter	35	"	"	m	4	4	2		5	52		
"	28	Germany	Germany	m	2	2	1		3	49	3	sick
Carriage trimmer	42	U. S.	U. S.	m	4	4	3		5	52		
Helper	37	Canada	Canada	m	2	2	2		3	49	3	sick
E. A. MUNSON.												
Finisher	23	U. S.	U. S.	s						48	4	slack work
Helper	24	"	Sweden	s						47	5	sick
Polisher	24	"	U. S.	s						52		
Grinder	22	"	"	s						52		
Helper	24	Germany	Germany	s						52		
Forger	27	U. S.	France	m	2	2			3	52		
Helper	35	"	Holland	m	4	4	3		5	52		
Helper	45	"	Canada	m	3	1	1		2	52		
Filer	29	"	Germany	m	2	2	1		3	52		
Grinder	46	Holland	Holland	m	5	3	2		4	52		
"	30	U. S.	U. S.	m	3	3	1		4	49	3	sick
"	52	"	"	m	5	2	2		3	50	2	"
Forger	37	Germany	Germany	m	3	3	3		4	46	6	"
Grinder	25	U. S.	U. S.	m	1	1			2	50	2	"

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$600 00	-----	\$600 00	\$530	\$1100	\$425	\$100	-----	\$5 00	-----	-----	1	\$5 00	-----	-----	\$2000
7 00	204 00	-----	204 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	400
15 00	720 00	-----	720 00	600	1800	600	-----	\$60	-----	-----	-----	1	5 00	-----	-----	2500
15 00	600 00	-----	600 00	520	-----	-----	-----	-----	8 00	-----	-----	1	5 00	-----	-----	700
16 50	808 50	-----	808 50	400	2500	100	400	-----	-----	-----	-----	1	5 00	-----	-----	3000
3 00	150 00	-----	150 00	-----	-----	-----	-----	*	-----	*	-----	-----	-----	12	-----	-----
5 00	245 00	-----	245 00	-----	-----	-----	-----	*	-----	*	-----	-----	-----	7	-----	-----
5 00	200 00	-----	200 00	-----	-----	-----	-----	*	-----	*	-----	-----	-----	-----	-----	-----
3 50	154 00	-----	154 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6	-----	-----
10 50	388 50	\$97	485 50	-----	-----	-----	-----	230	-----	\$3 50	-----	-----	-----	-----	-----	2000
12 50	537 50	-----	537 50	-----	-----	-----	-----	-----	-----	8 50	-----	-----	-----	-----	-----	1500
6 00	232 00	-----	232 00	-----	-----	-----	-----	-----	-----	3 50	-----	-----	-----	8	-----	300
13 50	638 50	-----	638 50	-----	-----	-----	-----	-----	-----	3 50	-----	-----	-----	21	-----	1200
15 00	600 00	-----	600 00	480	1600	-----	-----	80	-----	-----	\$1000	-----	-----	-----	-----	2600
15 00	600 00	-----	600 00	520	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	-----	1000
6 00	264 00	-----	264 00	-----	-----	-----	-----	*	-----	*	-----	-----	-----	13	-----	-----
7 50	390 00	-----	390 00	-----	-----	-----	-----	100	-----	3 00	-----	-----	-----	-----	-----	120
7 50	375 00	-----	375 00	-----	-----	-----	-----	60	-----	3 00	-----	-----	-----	-----	-----	75
8 00	368 00	-----	368 00	-----	-----	-----	-----	100	-----	3 00	-----	-----	-----	8	-----	170
9 00	468 00	-----	468 00	-----	-----	-----	-----	100	-----	3 50	-----	-----	-----	-----	-----	250
15 00	780 00	274	1054 00	650	1100	-----	120	280	-----	-----	-----	1	5 00	13	\$30	2800
15 00	780 00	-----	780 00	675	1000	-----	100	-----	-----	-----	2000	-----	-----	-----	-----	1800
13 50	702 00	-----	702 00	800	1000	-----	100	-----	-----	-----	1000	-----	-----	15	-----	1500
9 00	468 00	-----	468 00	465	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	700
15 00	780 00	136	915 00	800	1800	-----	175	140	-----	-----	2000	1	10 00	-----	-----	2900
13 00	624 00	-----	624 00	600	800	-----	-----	-----	-----	-----	-----	-----	-----	12	50	1200
13 50	702 00	-----	702 00	600	900	250	100	-----	-----	-----	1000	-----	-----	9	60	1100
15 00	735 00	-----	735 00	620	1200	400	115	-----	-----	-----	2000	-----	-----	12	-----	2000
15 00	780 00	-----	780 00	650	1500	-----	130	-----	-----	-----	2000	1	5 00	-----	-----	2400
7 50	367 50	-----	367 50	365	-----	-----	-----	-----	5 00	-----	-----	-----	-----	19	-----	500
12 00	576 00	25	601 00	-----	-----	-----	-----	175	-----	3 50	-----	-----	-----	-----	-----	550
7 50	352 50	-----	352 50	-----	-----	-----	-----	70	-----	3 50	-----	-----	-----	-----	-----	250
13 50	702 00	-----	702 00	-----	-----	-----	-----	200	-----	4 00	-----	-----	-----	-----	-----	500
7 50	390 00	-----	390 00	-----	-----	-----	-----	100	-----	3 50	-----	-----	-----	-----	-----	225
9 00	468 00	-----	468 00	-----	-----	-----	-----	150	-----	4 00	-----	-----	-----	10	-----	500
15 00	780 00	-----	780 00	650	1000	-----	120	-----	-----	-----	2000	-----	-----	-----	-----	1600
15 00	780 00	94	874 00	700	1000	-----	170	-----	-----	-----	2000	-----	-----	-----	-----	2500
9 00	468 00	-----	468 00	468	-----	-----	-----	-----	6 00	-----	-----	1	5 00	-----	-----	600
10 50	546 00	-----	546 00	540	-----	-----	-----	-----	6 00	-----	-----	1	5 00	-----	-----	450
9 00	468 00	-----	468 00	460	-----	-----	-----	-----	7 00	-----	1000	1	5 00	16	\$5	600
10 50	514 50	-----	514 50	500	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	550
11 50	575 00	-----	575 00	555	800	-----	-----	-----	-----	-----	-----	1	5 00	-----	-----	1300
12 00	552 00	-----	552 00	502	900	-----	50	-----	-----	-----	-----	-----	-----	16	35	1500
10 00	500 00	-----	500 00	500	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	450

* Gives wages to parents and lives at home.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
REMPTS & GALLMEYER.												
Molder	17	U. S.	U. S.	s						52		
"	20	"	"	s				2	2	52		
"	16	"	Canada	s						48	4	slack work
"	22	"	U. S.	s						52		
"	28	"	"	m	2	2			3	52		
"	32	"	"	m	3	3	2		4	50	2	sick
"	65	Germany	Germany	m	4				1	47	5	"
"	35	"	"	m	4	4	2		5	52		
"	24	Austria	Austria	m	1	1			2	49	3	sickness of family
BROBST & HIMES.												
Boiler maker	16	U. S.	Germany	s						52		
"	18	"	"	s						52		
"	19	"	"	s						52		
"	26	"	U. S.	s						52		
"	23	"	"	s						52		
"	22	"	Scotland	m					1	51	1	to get married
"	35	Canada	England	m	3	3	3		4	50	2	sick
"	42	Germany	Germany	m	4	5	4		6	52		
"	39	U. S.	U. S.	m	3	3	3		4	52		
"	25	"	"	m	1	1			2	52		
"	41	Germany	Germany	m	4	4	2		5	52		
"	28	Canada	Ireland	m	1	1			2	52		
C. O. & A. D. PORTER.												
Machinist	29	U. S.	U. S.	s				1	1	52		
Machine hand	18	"	"	s						49	3	sick
Machinist	20	Holland	Holland	s						52		
Machine hand	16	U. S.	U. S.	s						46	6	no work
"	19	"	"	s						49	3	sick
Machinist	68	"	"	m	1				1	52		
"	23	"	"	m	1	1			2	52		
"	33	"	"	m	2	2	1		3	52		
Engineer	64	"	"	m	4				1	52		
Machinist	41	"	"	m	5	5	3		6	52		
"	30	Germany	Germany	m	3	3	1		4	52		
Wood worker	45	U. S.	U. S.	m					1	52		
"	44	"	"	m	3	3	3		4	50	2	sick
Machinist	31	Germany	Germany	m	2	2	2		3	49	3	"
Wood worker	32	U. S.	U. S.	m	3	3	2		4	52		
SIMONDS SHINGLE MACHINERY CO.												
Molder	23	U. S.	"	s				2	2	52		
Machinist	31	Germany	Germany	m	3	3	2		4	47	5	sickness in family
"	39	U. S.	U. S.	m	3	3	3		4	50	2	sick
Molder	27	"	"	m	2	2			3	52		
"	38	"	"	m	2	2	2		3	52		
Wood worker	24	Germany	Germany	m	2	2			3	52		
Machinist	27	U. S.	U. S.	m	2	2			3	52		
"	27	U. S.	U. S.	m	2	2			3	52		
"	43	Russia	Russia	m	5	5	5		6	52		

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$7 50	\$390 00		\$390 00					*		*					
15 00	780 00		780 00	\$500				\$200		†					\$350
7 50	360 00		360 00							\$3 50					
15 00	780 00		780 00					400		8 50	\$2000	1	\$5 00		700
15 00	780 00		780 00	600				150	\$8 00		1000	1	5 00		780
15 00	750 00	\$50	800 00	620	\$1600		\$180				2000	1	5 00		2100
15 00	705 00		705 00	600	1200			10						81	1800
15 00	780 00		780 00	580	1200		150	200				1	5 00	23	\$25 1700
15 00	735 00		735 00	600	800	\$200	130				2000	1	5 00	18	900
4 50	234 00		234 00					*		*					
8 00	260 00		260 00					*		*					
9 00	468 00		468 00					25		4 50					75
12 00	624 00		624 00					200		4 00					1000
10 00	520 00		520 00					200		4 00					800
12 00	612 00		612 00	800	800						1000				1000
12 50	675 00		675 00	600	1200		75							17	1800
15 00	790 00		790 00	670	1500	200	100							31	2000
15 00	780 00		780 00	650	2000		120				2000				3000
12 00	624 00		624 00	500				110	5 00						1000
9 00	468 00		468 00	465	1200									18	2500
15 00	780 00		780 00	580	1000		200							20	1500
15 00	780 00		780 00	780					†						
6 00	294 00		294 00					*		*					
7 50	390 00		390 00					*		*				6	
4 00	184 00		184 00							8 00					
7 50	367 50		367 50					30		4 00					70
16 50	858 00		858 00	600	1200		120	60							2200
15 00	790 00		790 00	700				80	8 00						500
9 00	468 00		468 00	396	1000	630	72								1800
7 50	390 00		390 00	390					8 00						790
10 50	546 00		546 00	486	800	500	60				1000				1500
14 75	767 00		767 00	680	1000	500	83							17½	1800
12 00	624 00		624 00	470	2300	400	150								2600
15 00	750 00		750 00	600	1500		180	20			2000				2200
14 75	722 75		722 75	580	900	150	125				1000	1	5 00	16	1600
15 00	780 00		780 00	500	2000		250	25			2000				\$200
15 00	780 00		780 00	600				100		†	2000				800
12 00	564 00		564 00	534	800	150	80					1	5 00	21	1200
14 75	737 50		737 50	617	1500		120				2000				2200
12 00	624 00		624 00	600	1100						1000				1700
15 00	780 00		780 00	600				150	10 00						700
15 00	780 00		780 00	580	900	300	200					1	5 00	14	1000
15 00	780 00		780 00	590	1200	250	150				1000				1700
12 50	702 00		702 00	650					10 00		2000	1	5 00	32	700

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
WEST SIDE IRON WORKS.												
Machine hand	17	U. S.	Germany	s	—	—	—	—	—	52	—	
Machinist	23	"	Scotland	s	—	—	—	—	—	50	2	resting
Engineer and machinist	30	"	U. S.	s	—	—	—	—	—	53	—	
Machinist	22	Germany	Germany	s	—	—	—	1	1	52	—	
"	24	U. S.	Ireland	m	2	2	—	1	4	49	3	sickness of family
"	30	Germany	Germany	m	6	4	4	—	5	52	—	
"	29	U. S.	U. S.	m	1	1	—	—	2	52	—	
ALEX DODDS.												
Machine hand	16	"	Germany	s	—	—	—	—	—	52	—	
"	16	"	Ireland	s	—	—	—	—	—	49	3	sick
"	16	"	Holland	s	—	—	—	—	—	50	2	vacation
Machinist	22	Germany	Poland	s	—	—	—	—	—	49	3	no work
"	20	U. S.	Holland	s	—	—	—	—	—	50	2	vacation
Machine hand	18	"	U. S.	s	—	—	—	—	—	50	2	"
Machinist	21	Holland	Holland	s	—	—	—	1	1	52	—	
"	22	U. S.	Germany	s	—	—	—	—	—	48	4	rest
"	55	"	"	s	1	1	1	—	2	47	5	sickness

TABLE No. 3.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$3 00	\$156 00	-----	\$156 00	-----	-----	-----	-----	*	-----	*	-----	-----	-----	-----	-----	\$800
10 50	525 00	-----	525 00	-----	-----	-----	-----	\$200	-----	\$3 50	-----	-----	-----	-----	-----	1500
13 50	702 00	-----	702 00	-----	-----	-----	-----	800	-----	8 50	\$1000	-----	-----	-----	-----	1700
13 50	702 00	-----	702 00	\$370	\$800	\$200	\$150	120	-----	-----	2000	-----	-----	8	-----	1700
9 00	441 00	\$130	571 00	483	-----	-----	-----	138	\$7 00	-----	1000	-----	-----	-----	700	-----
9 00	488 00	80	548 00	500	1000	400	40	-----	-----	-----	-----	-----	-----	21	-----	1400
15 00	780 00	-----	780 00	450	3700	200	250	80	-----	-----	2000	-----	-----	-----	-----	4500
2 00	104 00	-----	104 00	-----	-----	-----	-----	*	-----	*	-----	-----	-----	-----	-----	-----
3 50	171 50	-----	171 50	-----	-----	-----	-----	*	-----	*	-----	-----	-----	-----	-----	-----
5 50	275 00	-----	275 00	-----	-----	-----	-----	*	-----	*	-----	-----	-----	-----	-----	-----
9 00	441 00	-----	441 00	-----	-----	-----	-----	-----	-----	†	-----	-----	-----	17	-----	-----
12 00	600 00	-----	600 00	-----	-----	-----	-----	175	-----	4 00	-----	-----	-----	-----	-----	350
7 50	875 00	-----	375 00	-----	-----	-----	-----	100	-----	8 00	-----	-----	-----	-----	-----	300
11 00	572 00	-----	572 00	420	-----	-----	-----	150	-----	-----	-----	1	\$5 00	16	-----	400
10 00	480 00	-----	480 00	-----	-----	-----	-----	150	-----	4 00	-----	1	5 00	-----	-----	400
15 00	705 00	80	785 00	600	1500	-----	-----	100	-----	-----	2000	-----	-----	-----	-----	4000

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

GRAND RAPIDS.

Seven hundred and seventy-six employ  s were canvassed: West Side Iron Works (manufacturers of wood working machinery), 7; J. C. Simonds & Son, 8; Alex. Dodds (manufacturer of wood cutting machinery), 9; Rempis & Gallmeyer (manufacturers of lawn settees, and vases and hitching posts), 9; F. Hartmann & Co. (manufacturers of farm scales), 10; Brobst & Himes (manufacturers of boilers and sheet iron work), 12; E. A. Munson (manufacturer of machine knives), 14; The Colby Wagon Co. (manufacturers of special, delivery and spring wagons, hose and police patrol wagons), 15; C. O. & A. D. Porter (manufacturers of wood working machinery), 15; Henry J. Hartman (manufacturer of castings for jobbing trade), 15; The Fox Machine Co. (manufacturers of specialties), 24; Grand Rapids Wheelbarrow Co. (manufacturers of wheelbarrows), 27; Grand Rapids Manufacturing and Implement Co. (manufacturers of agricultural implements), 27; Butterworth & Lowe, 34; The Belknap Wagon and Sleigh Co. (manufacturers of wagons and sleighs), 35; Wm. T. Powers & Son (manufacturers of saw mill machinery, engines and cable railway machinery), 41; Buss Machine Works (manufacturers of wood working machinery), 63; Valley City Iron Works (manufacturers of engines, boilers and mill machinery), 91; Grand Rapids Brass Works (manufacturers of artistic furniture trimmings in brass and bronze), 95; Perkins & Co. (manufacturers of shingle mill machinery), 101; Wm. Harrison (manufacturer of wagons), 124.

Nationality: Americans, 416; Hollanders, 86; Polanders, 9; Austrians, 11; Swiss, 3; Finn, 1; Russians, 8; Danes, 2; Swedes, 28; Germans, 138; Canadians, 43; Cuban, 1; Englishmen, 14; Irishmen, 11; Frenchman, 1; Norwegian, 2; Scotchmen, 2. 54 per cent are Americans and 46 per cent are foreigners. Of the foreigners 38 per cent are Germans; 23 per cent, Hollanders; 11 per cent, Canadians; 7 per cent, Swedes; 3 per cent each, Irishmen, Englishmen and Austrians; 2 per cent each, Russians and Polanders, and the other nationalities less than 1 per cent. Percentage of those born in the United States: American, 285; German, 55; Holland, 21; Irish, 15; Canadian, 15; English, 11; Austrian, 1; Swedish, 7; Scotch, 3; French, 2; Polish, 1. 68 per cent have American and 32 per cent have foreign parents. Four hundred and forty-two employ  s are married, 315 single and 19 widowers; 57 per cent are married, 41 per cent single and 2 per cent widowers. There are employed six boys 15, five 14 and one 13 years of age. Three hundred and seven support self only, seven support others than self by boarding and 462 support families: Americans, 220; Hollanders, 55; Polanders, 7; Austrians, 9; Swiss, 2; Finlander, 1; Russians, 7; Dane, 1; Swedes, 17; Germans, 94; Canadians, 30; Cuban, 1; Englishmen, 8; Irishmen, 7; Norwegians, 2; Scotchmen, 1. In 462 families there are 1,162 children, of whom 969 are supported. Fifty-eight married men have no children: 37 or 64 per cent are Americans; 7 Germans, 5 Hollanders, 3 Englishmen, 3 Canadians, 1 Swiss, 1 Russian, 1 Polander. Of the children supported 299 are under 5 years of age; 663, 5 and under 20, and 7 are over 20. Five hundred and forty-nine attend school, which is 83 per cent of school age. Five hundred and twenty-two or 95 per cent attend the public schools, 26 parochial and one a select school. Number of persons supported in families, 1,435; by boarding, 7. Fifty-five employ  s support 135 persons besides wife and children. Total number of weeks worked during the year, 38,468; average, 49.5+. Three hundred and eighty men, or 49 per cent, lost 1,717 weeks or 33 years and one week. Cause of lost time: Vacation, 60; sickness, 143; no work, 121; laid off, 24; vacation and sickness, 2; holidays, 1; accidents, 2; sickness and no work, 22; drunk, 2; not answered, 2; at school, 1.

Total annual earnings, \$417,699.12; average, \$538.27. Total incomes from other resources, \$15,969, as follows: Family earnings, \$7,488; boarding, \$300; pensions, \$456; interest, \$3,622; rent, \$4,103. Total annual earnings of Americans, \$222,620.83; average, \$535.14; Hollanders, \$40,665.30; average, \$472.85; Polanders, \$4,234.50; average, \$470.50;

Austrians, \$7,073.50; average, \$643.04; Swiss, \$1,680; average, \$560; Finlanders, \$661.50; average, \$661.50; Russians, \$4,730; average, \$591.25; Danes, \$1,380; average, \$690; Swedes, \$15,798.60; average, \$564.23; Germans, \$75,708.97; average, \$548.61; Canadians, \$23,335.80; average, \$542.69; Cuban, \$808.50; average, \$808.50; Englishmen, \$10,410.12; average, \$743.58; Irishmen, \$5,673.50; average, \$515.77; Frenchmen, \$706; average, \$705; Norwegians, \$1,001; average, \$500.50; Scotchmen, \$1,212; average, \$606. Average weekly wages of married men, \$12.40; single men, \$8.50; all employes, \$10.82. Wages paid per week: One employe, \$2; two, \$2.40; twenty-one, \$3; one, \$3.25; one, \$3.30; four, \$3.50; three, \$3.60; seven, \$4; two, \$4.20; nine, \$4.50; one, \$4.61; six, \$4.80; eleven, \$5; four, \$5.40; two, \$5.50; thirty-four, \$6; two, \$6.75; two, \$7; five, \$7.20; three, \$7.25; eighty-eight, \$7.50; one, \$7.75; two, \$7.80; six, \$8; one, \$8.25; four, \$8.40; six, \$8.50; two, \$8.88; ninety-nine, \$9; one, \$9.90; twenty-four, \$10; six, \$10.20; forty-five, \$10.50; one, \$10.68; five, \$11; one, \$11.10; one, \$11.25; four, \$11.40; two, \$11.50; ninety-eight, \$12; four, \$12.50; one, \$12.80; one, \$12.90; three, \$13; two, \$13.20; two, \$13.25; fifty-nine, \$13.50; four, \$14; two, \$14.40; five, \$14.75; one hundred and twenty-three, \$15; five, \$16; one, \$16.15; eight, \$16.50; one, \$16.75; twenty-four, \$18; one, \$19.23; one, \$20; two, \$21; one, \$22; four, \$23; one, \$25; one, \$27; one, \$34.61; one, \$36.

Total family expenses, \$248,001; per capita, \$130.73; Americans, \$119,990; per capita, \$147.41; Hollanders, \$27,207; per capita, \$111.50; Polanders, \$3,649; per capita, \$114.03; Austrians, \$4,925; per capita, \$133.11; Swiss, \$1,268; per capita, \$181.14; Finlanders, \$461; per capita, \$92.20; Russians, \$3,943; per capita, \$109.53; Danes, \$535; per capita, \$195; Swedes, \$9,076; per capita, \$108.04; Germans, \$50,008; per capita, \$116.84; Canadians, \$15,904; per capita, \$129.54; Cuban, \$600; per capita, \$150; Englishmen, \$5,150; per capita, \$171.67; Irishmen, \$3,690; per capita, \$123; Norwegian, \$995; per capita, \$66.33; Scotchmen, \$650; per capita, \$106.33. Number owning homes, 283: Americans, 120; Hollanders, 38; Polanders, 5; Austrians, 6; Swiss, 1; Russians, 5; Dane, 1; Swedes, 11; Germans, 72; Canadians, 17; Cuban, 1; Englishmen, 2; Irishmen, 3; Scotchmen, 1; 273 married men, 3 single men and 7 widowers own homes. 61+ per cent of married men own homes. 42+ per cent of home owners are Americans and 58+ per cent foreigners. Total value of homes, \$374,910; average, \$1,324.77; Americans, \$178,350; average, \$1,486.25; Hollanders, \$42,150; average, \$1,109.21; Polanders, \$5,200; average, \$1,040; Austrians, \$7,100; average, \$1,183.33; Swiss, \$1,500; average, \$1,500; Russians, \$6,460; average, \$1,292; Danes, \$2,000; average, \$2,000; Swedes, \$14,050; average, \$1,277.27; Germans, \$83,750; average, \$1,163.19; Canadians, \$24,100; average, \$1,417.64; Cuban, \$3,000; average, \$3,000; Englishmen, \$3,800; average, \$1,900; Irishmen, \$2,550; average, \$850; Scotchmen, \$900; average, \$900. The homes of 100 employes are mortgaged, which is 35+ per cent. Value of mortgaged homes, \$132,200; mortgaged for \$39,710, which is 30+ per cent of valuation. The homes of 42 Americans are mortgaged for \$14,925; 14 Hollanders, \$5,400; 2 Polanders, \$1,300; 2 Austrians, \$350; 1 Swiss, \$200; 3 Russians, \$1,850; 4 Swedes, \$2,450; 27 Germans, \$9,725; 5 Canadians, \$3,510. During the year 157 employes made payments and improvements upon homes amounting to \$22,960, and 296 men saved \$43,900 in money. Total number of employes who saved, 416, which is 53+ per cent. Total savings, including payments and improvements upon homes, \$66,860, which is 16+ per cent of total earnings. Total present worth of 629 employes (147 not reporting), \$632,745; average, \$1,319.71; Americans, 325; total, \$435,745; average, \$1,340.75; Hollanders, 71; total, \$76,690; average, \$1,080.14; Polanders, 8; total, \$3,680; average, \$1,085; Austrians, 10; total, \$15,000; average, \$1,500; Swiss, 2; total, \$2,800; average, \$1,400; Finlander, 1; total, \$800; Russian, 8; total, \$10,000; average, \$1,250; Danes, 2; total, \$4,900; average, \$2,450; Swedes, 25; total, \$27,685; average, \$1,107.40; Germans, 113; total, \$157,950; average, \$1,397.77; Canadians, 39; total, \$54,275; average, \$1,391.66; Cuban, 1; total, \$3,500; Englishmen, 12; total, \$20,670; average, \$1,722.50; Irishmen, 9; total, \$11,150; average, \$1,238.88; Norwegians, 2; total, \$800; average, \$400; Scotchman, 1; total, \$2,100. Four of the employes are worth \$5,000 each; one, \$5,500; one, \$6,000; one, \$10,000. Thirty-three Hollanders had \$2,218 upon arrival in this country; 4 Polanders, \$200; 3 Austrians, \$95; 1 Swiss, \$50; 3 Russians, \$340; 2 Danes, \$200; 18 Swedes, \$2,130; 33 Germans, \$2,790; 11 Canadians, \$1,845; 6 Englishmen, \$1,215; 4 Irishmen, \$185; 1 Norwegian, \$100. Total present worth of foreigners, \$397,000. Number renting homes, 174: Americans, 96; Hollanders, 15; Polanders, 2; Austrians, 3; Swiss, 1; Finlander, 1; Russians, 2; Swedes, 7; Germans, 23; Canadians, 13; Cuban, 1; Englishmen, 6; Irishmen, 2; Norwegians, 2. Ten renters are single men, one a widower and two have rent free. 36+ per cent of married men and 22+ per cent of total employes rent.

Total monthly rent, \$1,236.50; average, \$7.11. Total annual rent, \$14,838; average, \$85.27. Per cent of rent to earnings, 14+. Per cent of rent to expenses, 16-. Total monthly rent of Americans, \$716.50; average, \$7.46; Hollanders, \$89; average, \$5.93; Polanders, \$10; average, 5; Austrians, \$34; average, \$11.33; Swiss, \$10; average, \$10; Finlanders, \$5; average, \$5; Russians, \$20; average, \$10; Swedes, \$45; average, \$6.43; Ger-

mans, \$137.50; average, \$5.98; Canadians, \$89; average, \$6.35; Cuban, \$10; average, 10; Englishmen, \$48.50; average, \$8.08; Irishmen, 10; average, \$5; Norwegians, 12; average, \$6.

Number of employes boarding, 221, which is 29-per cent of total. 82 live at home and give wages to parents; 13 live at home and pay no stated sum for board; 6 live at home and support family. Total weekly board, \$813.75; average, \$3.68; Americans, 140; total, \$509.50; average, \$3.64; Hollanders, 20; total, \$74.50; average, \$3.72; Polanders, 1; total, \$3.50; Russian, 1; total, \$3.50; Dane, 1; total, \$3.50; Swedes, 10; total, \$37; average, \$3.70; Germans, 26; total, \$100.25; average, \$3.85; Canadians, 10; total, \$35; average, \$3.50; Englishmen, 5; total, \$21; average, \$4.20; Austrian, 1; total \$4; Irishmen, 4; total, \$14.50; average, \$3.63; Frenchmen, 1; total, 4; Scotchmen, 1; total, \$3.50. 123 keep an itemized account of their expenses, which is 16-per cent. 325 own sewing machines, which is 70-per cent of those supporting families. 147 own musical instruments, which is 19-per cent. Number of musical instruments: Pianos, 26; organs, 110; violins, 7; guitars, 8; flutes, 2; banjos, 1. Number of employes who take newspapers and magazines, 445: Americans, 263; Hollanders, 40; Polanders, 4; Austrians, 8; Swiss, 2; Finlanders, 1; Russians, 7; Danes, 2; Swedes, 10; Germans, 71; Canadians, 21; Cuban, 1; Englishmen, 9; Irishmen, 4; Frenchmen, 1; Scotchmen, 1. 57-per cent take newspapers and magazines, of which 59-per cent are Americans. Number of dailies taken, 335; story, 14; religious, 43; labor, 20; scientific, 7; local and other weekly papers, 373; magazines, 24; miscellaneous, 1.

Three hundred and ninety-five work at hand and 268 at machine work, and 113 at both. 4 men or less than 1 per cent have been injured since engaged as employes. 22 reported that their labor organization had been of financial benefit to them, and 158, no financial benefit. Other than financially, 146 reported that their labor organization had been of no benefit to them. 157 carry life insurance amounting to \$267,700; average, \$1,768.78; Americans, 104; total, \$183,700; Hollanders, 7; total, \$12,000; Polanders, 1; total, \$1,000; Austrians, 6; total, \$10,500; Russians, 3; total, \$4,500; Germans, 28; total, \$39,000; Canadians, 4; total, \$9,000; Englishmen, 4; total, \$3,000. 20-per cent of employes are insured. 195 belong to benefit societies: Americans, 91; total, \$612.50; average, \$6.73; Hollanders, 15; total, \$75; average, \$5; Polanders, 1; total, \$5; Austrians, 4; total, 35; average, \$8.75; Russians, 4; total, \$25; average, \$6.25; Swedes, 6; total, \$30; average, \$5; Germans, 50; total, \$269; average, \$5.38; Canadians, 15; total, \$85; average, \$5.67; Englishmen, 4; total, \$20; average, \$5; Irishmen, 3; total, \$15; average, \$5; Norwegians, 1; total, \$5; Scotchmen, 1; total, \$5. Total weekly benefit, \$1,181.50; average, \$6.06. 25-per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
KALAMAZOO.

TABLE No. 4.—*Showing the Individual Reports*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
KALAMAZOO WHEEL CO.												
Wheel rimmer	27	U. S.	U. S.	m	1	1			1	50	2	laid off
Wood worker	27	"	"	m	1	1			2	44	8	sick and laid off
Spoke driver	30	"	Germany	m	1	1			1	48	4	laid off
Wheel marker	22	"	"	m	1	1			2	37	15	no work
Laborer	24	Germany	"	m	1	1			1	50	2	laid off
Wood worker	23	U. S.	"	wr						26	26	sick
Polisher	34	"	"	m	3	3	2		4	49	3	laid off
"	37	"	"	m	2	2	1		3	43	4	laid off and sick
"	19	"	U. S.	m	1	1			1	26	26	at work for self
Machinist	26	Germany	Germany	m	1	1			2	52		
Polisher	24	U. S.	"	m	1	1			2	32	20	no work
Spoke setter	21	"	U. S.	m	1	1			2	39	13	"
Spoke wedger	23	"	"	m					1	45	7	laid off
Wheel planer	54	Italy	Italy	m	4	3	1		4	43	4	"
Planer	31	Denmark	Denmark	m	1	1			2	43	4	"
Laborer	46	U. S.	U. S.	m	1	1		1	3	43	9	"
"	43	Switz.	Switz.	m	2	2			3	43	9	no work
"	30	Germany	Germany	m	3	3			4	49	3	laid off and sick
"	35	U. S.	U. S.	m	5	4	1		5	50	2	"
"	31	Holland	Holland	m	2	2			3	45	7	sick and laid off
"	52	Germany	Germany	m	6	3	3		4	47	5	laid off
Blacksmith	24	"	"	m					1	49	3	sick and laid off
Laborer	46	U. S.	U. S.	m	3	3	3		4	50	2	sick
Machinist	29	"	Germany	m	3	3	1		4	52		
Laborer	52	Ireland	Ireland	m	6	6	5		7	46	6	sick and laid off
"	34	Germany	Germany	m	1	1	1		2	31	21	sick and no work
"	35	"	"	m	1	1			2	39	13	laid off
Carpenter	40	U. S.	U. S.	m	2	2	2		3	34	18	sick and laid off
Wheel finisher	36	Germany	Germany	m	2	2	1		3	50	2	"
Wheel riveter	27	U. S.	U. S.	m	1	1			2	39	13	laid off
Hub mortiser	23	"	Germany	m					1	43	4	"
Hub turner	36	Germany	"	m	5	5	3		6	26	26	sick and laid off
Laborer	45	"	"	m	1	1			2	51	1	laid off
Wheel inspector	30	U. S.	Ireland	m	1	1			1	47	5	laid off and sick
Wheel finisher	31	"	Germany	m	1	1			2	49	3	"
"	32	"	U. S.	m					1	49	3	laid off
Machinist	23	Holland	Holland	m					1	20		first work in U. S.
Wheel polisher	34	U. S.	U. S.	m	3	3	2		4	43	9	sick and laid off
Wheel rounder	41	Ireland	Ireland	m	1	1	1		2	40	12	no work
"	25	Germany	Germany	m					1	43	4	laid off and sick
Wood worker	27	Holland	Holland	m					1	34	18	sick and no work
"	49	Germany	Germany	m	6	6	3		7	43	4	sick and laid off
"	29	"	"	wr	1	1			1	50	2	laid off
"	27	U. S.	Scotland	m					1	49	3	sick and laid off
"	33	"	U. S.	m					1	26	26	no work
"	36	Germany	Germany	m	1	1	1		2	42	10	sick and laid off
"	29	U. S.	Ireland	m	2	2			3	49	3	laid off
"	31	Germany	Germany	m	3	3	1		4	43	4	sick and laid off
"	29	U. S.	U. S.	m					1	49	3	laid off
"	26	"	"	m	1	1			2	49	3	sick and laid off

of the Employés in Kalamazoo.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$200 00		\$200 00	\$540				\$60	\$5 00			1	\$5 00			\$200
12 50	550 00		550 00	550					5 00							200
12 50	648 00	\$400	1144 00	844				300	12 00							1200
9 00	238 00		238 00						\$3 50							150
6 00	300 00		300 00	300					6 50		\$500	1	5 00	3	\$20	100
7 00	182 00		182 00							3 50						25
10 00	490 00		490 00	490					9 00							200
10 00	480 00		480 00	430				50	7 00							250
9 00	234 00	812	546 00	490				50								100
10 50	546 00		546 00	416	\$900		\$30	100			50	1	5 00	9	50	2800
7 00	224 00		224 00	224					free							100
8 00	312 00		312 00	312					4 00							100
7 00	315 00		315 00							6 00						175
8 00	334 00		334 00	334					6 50					38		200
7 00	336 00		336 00	336					5 00					16	500	100
6 00	258 00	250	508 00	389				125	free							200
6 76	290 50	75	365 50	315	50		50				500	1	5 00	1		200
6 76	331 24		331 24	331	300	\$200					500	1	5 00	6	17	200
6 76	338 00		338 00	338					8 50							100
6 50	292 50		292 50	224	1000	200	68							9		1000
6 76	317 72		317 72	317					8 00					35	400	200
8 50	416 50		416 50	416					8 00		1000	1	5 00	7		100
7 50	375 00	102	477 00	427				50	8 50		2000					600
19 23	1000 00		1000 00	1000					10 00		1000	2	10 00			500
6 25	287 50		287 50	365					9 00					42		50
6 00	186 00		186 00	186	700	450					500	1	5 00	7	200	200
6 76	263 64		263 64	243				20	4 00					21		100
8 00	272 00	25	297 00	297	1200	400										1000
10 00	500 00		500 00	450				50	8 50					16		700
6 76	268 64		268 64	268					8 00							1000
8 00	384 00		384 00	259				125	6 00							500
7 50	195 00		195 00	350	1600	700					500	1	5 00	11	75	1000
8 00	408 00		408 00	358	1000			50			500	1	5 00	24		1200
9 50	446 50		446 50					125		6 50						400
10 00	490 00		490 00	490					10 00							500
10 00	490 00		490 00	490					7 00		50	1	5 00			700
6 76	185 20		185 20	121					6 00					5 mo	200	200
7 50	322 50		322 50	322					7 00							150
12 00	480 00		480 00	380				100	8 00					38		350
10 00	450 00		450 00	480					9 00					18		500
6 00	204 00		204 00						free					6		
15 50	744 00		744 00	744								1	10 00	40		1500
7 00	350 00		350 00					50		5 50	500	1	5 00	7	200	50
7 00	343 00	21	364 00	214				150	6 50							625
7 00	182 00		182 00	182					8 00							75
6 50	278 00		278 00	278					5 50					21		900
7 50	367 50		367 50	367					7 50							125
6 00	288 00		288 00	218	600	300	75				500	1	5 00	8		500
7 50	367 50		367 50	367					5 00		1000					300
7 50	367 50	1870	2237 50	437	1600		1600	200								2500

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker	50	U. S.	Germany	W	2	2	1		3	51	1	holidays
"	34	"	U. S.	H	1	1	1		2	42	10	sick
Steamer	25	Switz.	Switz.	H	1	1			2	50	2	laid off
Wheel polisher	30	Germany	Germany	s						48	4	"
"	25	U. S.	U. S.	s				1	1	49	3	accident and laid off
"	25	"	Ireland	s						50	2	laid off
"	29	Germany	Germany	s						52	2	laid off and sick
Wood worker	57	"	"	H	2	2			4	50		
"	19	U. S.	Holland	M	1	1			2	48	4	laid off
Laborer	50	Germany	Germany	M	1	1			2	52		
Wood worker	45	"	"	M	4	4	1		5	50	2	laid off
Hub presser	29	U. S.	U. S.	s						50	2	"
Wheel rimmer	22	"	Italy	s						48	4	laid off and sick
"	28	"	U. S.	s						48	4	laid off
"	23	"	England	s						48	4	laid off and vacation
Wood worker	19	"	U. S.	s						48	4	laid off
Laborer	12	"	Ireland	s						26		first work
Wood worker	20	Germany	Germany	s						50	2	no work
"	23	U. S.	Ireland	s						50	2	laid off and sick
"	26	Holland	Holland	s						49	3	laid off
"	17	Scotland	Scotland	s						48	4	laid off
"	19	Holland	Holland	s				2	2	49	3	"
"	19	U. S.	Germany	s						50	2	"
"	19	"	Ireland	s				2	2	43	9	sick and laid off
"	15	"	U. S.	s						50	2	laid off
"	19	"	Germany	s						49	2	laid off
"	17	"	"	s						50	2	sick
"	15	"	"	s						26		first work
"	16	"	Ireland	s						29		"
Steamer	15	"	Holland	s						50	2	sick and laid off
Wheel finisher	24	"	Germany	s						43	9	laid off and sick
Laborer	15	"	France	s						29	23	no work
"	14	"	U. S.	s						48	4	"
Wood worker	15	"	"	s						50	2	laid off
Laborer	16	Holland	Holland	s						51	1	sick
Wood worker	16	"	"	s						48	4	sick and laid off
Wheel rimmer	31	U. S.	Ireland	s						50	2	laid off
Wheel grinder	21	"	U. S.	s						49	3	"
Wood worker	16	"	Holland	s						49	3	"
Hub champer	17	Scotland	Scotland	s						50	2	"
Spoke driver	24	U. S.	Ireland	s						47	5	laid off
"	25	"	France	s						41	11	laid off and sick
Machine hand	18	"	U. S.	s						52		
"	26	Germany	Germany	s						49	3	no work
Spoke driver	23	U. S.	"	s						47	5	laid off and sick
Hub marker	22	"	U. S.	s						49	3	laid off
Spoke driver	31	"	Germany	s						48	9	"
Wheel marker	22	Germany	"	s						49	3	shut down
Laborer	14	U. S.	Holland	s						37	15	sick
Wheel marker	24	"	Ireland	s						43	9	no work
"	21	"	Germany	s						42	10	sick
Laborer	17	Holland	Holland	s						23		first work
"	14	U. S.	U. S.	s						20	12	at school

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt. p't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$459 00		\$459 00	\$411	\$1200	\$300		\$40								\$1000
7 50	815 00		815 00	815					\$7 50		\$1000	1	\$3 00			900
7 00	350 00		350 00	330				20	5 00		500	1	5 00	3		100
8 00	394 00		394 00							\$5 00				16	\$25	80
6 80	323 40		323 40	278				45	5 00							50
8 00	400 00		400 00							4 00						50
7 50	375 00		375 00							3 25	500	1	5 00	7	100	200
8 00	416 00		416 00	388				50	7 50					36		1000
7 50	360 00		360 00	280				100	4 00							200
7 00	364 00		364 00	364					8 00					4	500	500
8 00	400 00	\$250	650 00	650					8 00					36		700
9 00	450 00		450 00							3 50						50
14 00	672 00		672 00					150		5 00						250
12 00	576 00		576 00							3 50						
15 00	720 00		720 00							4 00						150
5 85	280 80		280 80					25		3 00						100
3 50	91 00		91 00					*		*						
7 00	182 00		182 00							3 50				9		50
7 50	375 00		375 00					20		4 00						40
7 00	343 00		343 00					70		2 50				7		500
6 00	288 00		288 00							3 50				8		100
5 00	245 00		245 00	245					8 00					8		50
7 50	375 00		375 00							4 00						50
6 78	290 68		290 68	290												15
6 00	300 00		300 00							3 00						100
7 50	367 08		367 00							3 50						25
5 85	292 50		292 50					*		*						
3 00	78 00		78 00					*		*						
3 50	101 50		101 50					20		1 50						
3 50	175 00		175 00					*		*						
9 00	387 00		387 00					125		3 50		1	5 00			400
2 85	82 65		82 65					*		*						
3 50	168 00		168 00					*		*						
3 50	175 00		175 00					*		*						
3 50	178 50		178 50					*		*				8		
3 80	172 80		172 80					*		*				8		
12 80	600 00		600 00							3 50						100
9 00	441 00		441 00							4 00						200
4 00	196 00		196 00					*		*						
4 50	225 00		225 00					*		*				9		
15 00	705 00		705 00							4 00						200
12 00	588 00		583 00							3 50						200
7 00	364 00		364 00							3 00						
8 80	416 50		416 50							4 00				14		50
14 00	658 00		658 00					100		4 00						125
10 00	490 00		490 00							4 00						45
10 00	480 00		480 00							3 50						75
10 20	499 80		499 80							3 50				19		100
3 50	129 50		129 50					*		*						
8 00	344 00		344 00							8 75						15
8 40	352 80		352 80							3 50						
4 80	153 80		153 80					*		*				16		
2 95	115 08		115 08					*		*						

* Gives wages to parents and lives at home.

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Rim sorter	22	U. S.	Ireland	s	—	—	—	—	—	50	2	laid off
Wood worker	16	"	Holland	s	—	—	—	—	—	37	15	"
Laborer	15	"	"	s	—	—	—	—	—	49	3	"
"	19	Holland	"	s	—	—	—	—	—	31	—	first work in U. S.
"	16	"	"	s	—	—	—	—	—	50	2	laid off
Wood worker	16	U. S.	Germany	s	—	—	—	—	—	43	9	"
"	19	Canada	Canada	s	—	—	—	—	—	51	1	"
"	15	U. S.	U. S.	s	—	—	—	—	—	49	3	"
Wheel finisher	26	"	Ireland	s	—	—	—	—	—	44	8	sick and laid off
"	39	"	U. S.	s	—	—	—	1	1	29	13	sick and no work
"	26	"	"	s	—	—	—	—	—	43	9	laid off and vacation
"	22	"	Germany	s	—	—	—	—	—	49	3	laid off
Spoke polisher	25	"	"	s	—	—	—	—	—	47	5	laid off and vacation
"	22	"	Ireland	s	—	—	—	—	—	49	2	laid off
"	21	"	"	s	—	—	—	—	—	50	2	"
Spoke sawyer	14	Holland	Holland	s	—	—	—	—	—	20	22	no work
"	13	U. S.	Germany	s	—	—	—	—	—	21	—	first work
Hub sorter	19	"	U. S.	s	—	—	—	—	—	48	4	laid off
Wheel filer	14	Holland	Holland	s	—	—	—	—	—	48	4	sick and laid off
Wheel cleaner	13	Scotland	Scotland	s	—	—	—	—	—	17	—	first work and accident
Hub turner	12	U. S.	Holland	s	—	—	—	—	—	28	26	at school
Wheel riveter	19	"	"	s	—	—	—	—	—	48	4	laid off
Machine hand	16	"	"	s	—	—	—	—	—	50	2	"
Blacksmith helper	20	Holland	"	s	—	—	—	—	—	48	4	"
Laborer	11	U. S.	U. S.	s	—	—	—	—	—	49	3	laid off and vacation
"	12	Switz.	Switz.	s	—	—	—	—	—	31	21	at work at home
Rim sawyer	16	Holland	Holland	s	—	—	—	—	—	49	3	laid off
Wheel planer	21	U. S.	Germany	s	—	—	—	—	—	46	6	"
Spoke facer	15	"	"	s	—	—	—	—	—	48	4	"
Spoke wedger	18	"	Ireland	s	—	—	—	—	—	38	14	laid off and vacation
Spoke sawyer	17	"	Holland	s	—	—	—	—	—	48	4	laid off
Spoke sizer	16	"	U. S.	s	—	—	—	—	—	46	6	laid off and sick
"	15	"	Germany	s	—	—	—	—	—	49	3	laid off
Spoke sawyer	15	Holland	Holland	s	—	—	—	—	—	20	32	at school
Wheel finisher	35	U. S.	Ireland	s	—	—	—	—	—	50	2	laid off
Wheel inspector	25	Germany	Germany	s	—	—	—	—	—	49	3	sick and laid off
"	26	U. S.	U. S.	s	—	—	—	—	—	50	2	laid off
Hub sorter	18	"	Holland	s	—	—	—	—	—	43	4	"
Wheel cleaner	21	"	Ireland	s	—	—	—	—	—	37	15	sick and laid off
Hub mortiser	23	"	Germany	s	—	—	—	—	—	48	4	laid off and vacation
Hub turner	25	"	"	s	—	—	—	—	—	48	4	laid off
"	18	"	"	s	—	—	—	—	—	48	4	sick and laid off
Hub selector	19	"	"	s	—	—	—	—	—	48	4	laid off
Wheel rimmer	25	"	Ireland	s	—	—	—	—	—	46	6	laid off and sick
Machinist	23	"	Germany	s	—	—	—	—	—	46	6	laid off
Blacksmith	19	"	Holland	s	—	—	—	—	—	17	35	sick and laid off
Machinist	25	"	Germany	s	—	—	—	—	—	53	—	"
Rim borer	21	Germany	"	s	—	—	—	—	—	51	1	laid off
Wheel planer	42	"	"	s	—	—	—	—	—	48	4	laid off and vacation
"	29	"	"	s	—	—	—	—	—	50	2	laid off
Rim sorter	33	U. S.	U. S.	s	—	—	—	—	—	50	2	"
Hub mortiser	25	"	Germany	s	—	—	—	—	—	48	9	"
Spoke sizer	24	Germany	"	s	—	—	—	—	—	50	2	"

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$2 00	\$450 00		\$450 00							\$3 50						\$50
5 86	216 45		216 45					*		*						
5 86	286 63		286 63					*		*						
5 86	181 35		181 35					*		*				8 mo		
8 50	175 00		175 00					*		*				1		
6 00	258 00		258 00							3 50						
7 00	357 00		357 00							4 00				16		100
5 86	286 63		286 63					*		*						
10 00	440 00		440 00							3 50						75
9 00	351 00		351 00							4 00						70
10 00	430 00		430 00					\$200		4 00	\$50	1	\$5 00			500
9 00	441 00		441 00							8 50						70
11 00	517 00		517 00							4 00						100
12 00	588 00		588 00					95		3 50						100
12 00	600 00		600 00							8 50						100
1 50	70 00		70 00							3 50						
1 50	73 50		73 50					*		*						
5 00	240 00		240 00					*		*						50
1 50	168 00		168 00					*		*						
3 50	59 50		59 50					*		*						150
1 50	91 00		91 00					*		*						
5 86	280 80		280 80					*		*						50
4 00	200 00		200 00					*		*						
5 00	240 00		240 00					*		*				1		15
1 40	117 60		117 60					*		*						
2 40	74 40		74 40					*		*						
8 25	159 25		159 25					*		*				1		
8 00	368 00		368 00					*		*						
4 00	192 00		192 00					*		*						
5 50	209 00		209 00					*		*						
4 50	216 00		216 00					*		*						
4 00	184 00		184 00					*		*						
4 00	196 00		196 00					*		*						
1 50	70 00		70 00					*		*						
10 00	500 00		500 00							8 50				10		100
9 00	441 00		441 00					75		4 00				18		100
8 00	406 00		406 00					50		8 00						200
4 00	192 00		192 00							3 00						70
9 00	333 00		333 00							3 50						75
9 00	432 00		432 00							3 50						
9 00	432 00		432 00							8 50						70
8 00	394 00		394 00							8 00						150
9 00	432 00		432 00							4 00						100
13 50	621 00		621 00					40		4 00						150
10 00	460 00		460 00							3 50	1000	1	5 00			100
6 76	114 92		114 92							8 50						25
9 00	468 00		468 00							4 00						75
8 00	408 00		408 00							3 50						75
7 50	360 00		360 00					100		3 50				9		2000
8 00	400 00		400 00							4 00						50
10 50	525 00		525 00							4 00				22		50
8 50	365 50	\$18	383 50					100		8 50	610	1	5 00			1800
7 00	350 00	60	410 00					45		8 50	500	1	5 00	8	\$25	800

* Lives at home and gives wages to parents.

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Spoke polisher	27	U. S.	Germany	s	—	—	—	—	—	41	11	no work
Spoke sorter	23	"	"	s	—	—	—	—	—	46	6	laid off
"	27	Ireland	Ireland	s	—	—	—	—	—	50	2	"
Spoke polisher	18	U. S.	U. S.	s	—	—	—	1	1	39	13	no work
"	19	"	Ireland	s	—	—	—	—	—	48	4	laid off and vacation
Spoke wedger	18	"	U. S.	s	—	—	—	—	—	39	13	"
KALAMAZOO WAGON CO.												
Trimmer	23	"	"	s	—	—	—	—	—	43	4	vacation
"	17	"	"	s	—	—	—	—	—	47	5	"
"	28	"	"	s	—	—	—	—	—	50	2	"
"	22	"	"	s	—	—	—	—	—	26	26	sick and out of work
"	23	"	Ireland	s	—	—	—	—	—	43	4	laid off and vacation
Wood worker	32	Canada	Canada	s	—	—	—	—	—	46	6	vacation
"	30	U. S.	U. S.	s	—	—	—	—	—	50	2	laid off
"	30	Canada	Scotland	s	—	—	—	—	—	52	—	"
"	22	U. S.	Holland	s	—	—	—	—	—	46	6	laid off
"	28	Holland	"	s	—	—	—	—	—	53	—	"
Painter	26	Canada	England	s	—	—	—	—	—	51	1	holidays
Blacksmith	26	U. S.	Germany	s	—	—	—	—	—	51	1	vacation
"	24	"	Ireland	s	—	—	—	—	—	48	4	sick and laid off
"	23	Holland	Holland	s	—	—	—	—	—	47	5	laid off
Finisher	23	U. S.	U. S.	s	—	—	—	—	—	48	9	"
Blacksmith	27	"	England	s	—	—	—	2	2	50	2	vacation
Painter	22	"	Holland	s	—	—	—	—	—	39	18	sick and out of work
"	42	Holland	"	m	3	3	2	—	4	49	3	laid off
"	37	U. S.	Germany	m	—	—	—	—	1	53	—	"
"	21	"	U. S.	m	1	1	—	—	2	45	7	laid off
"	27	Canada	Canada	wr	1	1	—	—	2	52	—	"
"	30	Holland	Holland	m	1	1	—	—	2	51	1	laid off
Wood worker	36	U. S.	U. S.	m	1	1	—	—	2	39	13	on farm
Blacksmith	36	Canada	Scotland	m	2	2	—	1	4	50	2	vacation
"	27	Holland	Holland	m	1	1	—	—	2	47	5	sick and laid off
"	28	U. S.	U. S.	m	—	—	—	—	1	46	6	laid off and vacation
"	28	"	England	m	—	—	—	—	1	47	5	laid off
"	31	"	U. S.	m	2	2	—	—	3	49	3	sick and vacation
"	41	"	"	m	—	—	—	1	2	49	3	laid off
"	26	Ireland	Ireland	m	2	2	—	—	3	51	1	holidays
"	19	Holland	Holland	m	—	—	—	—	1	40	12	"
Finisher	47	U. S.	U. S.	wr	1	1	—	—	1	39	13	sick and laid off
Teamster	48	England	England	m	—	—	—	—	1	52	—	"
Painter	34	U. S.	U. S.	m	2	2	1	—	3	46	6	laid off
"	29	"	"	m	2	2	—	—	3	45	7	"
"	36	"	"	m	2	2	1	—	3	40	12	"
"	24	"	"	m	—	—	—	—	1	18	39	worked for self
"	56	"	"	m	3	3	2	—	4	41	11	sick and laid off
"	32	Holland	Holland	m	—	—	—	—	1	45	7	out of work
Wood worker	50	U. S.	U. S.	m	2	—	—	1	2	50	2	"
"	32	Canada	England	wr	—	—	—	—	—	52	—	"
Trimmer	25	"	Canada	wr	1	1	—	—	1	52	—	"
"	36	U. S.	U. S.	m	—	—	—	—	1	46	6	laid off and vacation
"	32	"	"	m	2	2	—	—	3	51	1	holidays
"	44	Canada	Canada	m	6	6	3	—	7	51	1	"

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
30 00	\$369 00		\$369 00					\$80		\$4 00						\$300
8 00	368 00		368 00							3 50						28
10 00	500 00		500 00							3 50				28		40
5 00	195 00		195 00							3 50						
11 00	528 00		528 00					\$100		3 50						50
7 00	273 00		273 00							3 50						
15 00	720 00	\$10	720 00					200		4 25						900
5 00	235 00		235 00							free						
12 00	600 00		600 00					75		5 00						
9 00	234 00		234 00							3 50						100
9 00	432 00		432 00							3 50						50
11 00	506 00		506 00					280		4 00	\$1000			9		800
13 54	692 00		692 00					200		4 50						300
18 00	986 00		986 00					200		6 00	1000	1	\$5 00	12		
12 00	552 00		552 00							3 50						200
10 80	561 50		561 00							3 50				9		150
13 50	688 50		688 50					100		5 00				10		300
12 00	612 00		612 00					50		3 50						250
12 00	576 00		576 00					200		4 00						800
8 00	376 00		376 00					200		3 00				17		875
9 00	387 00		387 00					98		3 50						240
7 50	375 00		375 00	\$250				125		†						500
7 50	292 50		292 50							†						75
10 00	490 00		490 00	490	\$1400									7	\$300	1500
9 00	468 00		468 00	468	809			100	\$6 00							250
9 00	405 00		405 00	425	1800											2000
7 50	390 00		390 00							5 00				24		
8 00	408 00		408 00	368				40	7 50					10		300
10 50	409 50		409 50	496	1100	\$750	\$50									680
16 58	525 00		525 00	500	1200		25	300						9	800	1700
7 58	352 50		352 50					47		3 50				18		750
12 00	582 00	20	572 00	372				200	8 00							1500
10 00	470 00	8	478 00	338	700		85	110								1800
10 50	514 50		514 50	300	1000	250	214				1000	1	5 00			1000
9 00	441 00		441 00	441					6 00							800
9 00	459 00		459 00	309	1200	800	150				1000			6		600
7 50	800 00		800 00	255				45	5 00					9		100
9 00	351 00		351 00							4 00						50
9 00	468 00		468 00	318	2000	100	150				1000	1	5 00	32		1200
9 00	414 00		414 00	414					6 00							500
7 50	337 50		337 50	312	500	190	25									485
7 50	300 00	75	375 00	315				60	8 00							1800
9 00	117 00		117 00	800					3 50							
10 50	430 50		430 50	399	1600	450	81				2000					1500
9 50	427 50		427 50					70		6 00				22		280
10 00	500 00		500 00	400				100	10 00		1000					1000
12 50	702 50		702 50					160		5 00				6	150	280
15 00	780 00		780 00					800		5 00				9		300
12 00	552 00		552 00							8 25						1800
12 50	698 50		698 50	586	1200	900	100									3000
10 00	510 00		510 00	489	700	800	21							16		600

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
ST. JOHN PLOW CO.												
Laborer	39	Holland	Holland	m	4	4	4		5	51	1	holidays
Shipping clerk	32	Ireland	Ireland	m	2	2			2	51	1	"
Laborer	48	Holland	Holland	m	5	5	3		8	49	3	holidays and laid off
"	35	"	"	m	4	4	3		7	49	3	"
"	35	"	"	m	5	5	3		8	39	12	laid off
Machinist	47	U. S.	U. S.	m					1	43	3	sick and holidays
Carpenter	62	"	"	m					1	51	1	holidays
Machinist	60	England	England	m	1	1			2	51	1	"
Blacksmith	32	U. S.	U. S.	m	1	1	1		3	38	14	holidays and no work
"	32	Holland	Holland	m	4	4	3		5	48	4	holidays and laid off
Laborer	33	"	"	m	3	3	1		4	52		
"	44	"	"	m	2	2			3	42	10	sick and no work
Molder	24	U. S.	U. S.	m	1	1			1	39	13	laid off
"	24	"	Scotland	m	1	1			2	39	12	sick and no work
"	50	Scotland	"	m	2	2			2	46	6	laid off
"	60	Holland	Holland	m	2	2			3	46	6	sick and laid off
"	30	U. S.	U. S.	m				2	3	51	1	holidays
"	20	Holland	Holland	m	2	2			2	50	2	vacation
"	31	U. S.	U. S.	m	2	2			3	48	4	sick
Steel worker	45	Holland	Holland	m	2	2	1		3	48	4	vacation
Blacksmith	27	U. S.	U. S.	m	1	1			2	42	10	sick and vacation
"	33	"	"	m	1	1	1		2	49	3	laid off
Laborer	21	"	Holland	s				1	1	47	5	"
"	21	"	"	s						43	9	no work
Painter	19	"	Canada	s				1	1	47	5	laid off
Machinist	20	"	U. S.	s						50	2	holidays
Blacksmith helper	22	Holland	Holland	s						51	1	"
"	17	U. S.	"	s						50	2	laid off
Blacksmith	30	"	U. S.	s						50	2	holidays
Molder	17	"	"	s				1	1	48	4	sick and laid off
"	17	"	Holland	s						39	13	sick
"	19	"	U. S.	s						48	4	sick and laid off
"	20	"	"	s						22	30	at other work
Core maker	17	"	"	s				1	1	39	13	no work
"	18	"	"	s				2	2	22	30	"
FULLER BROS. MFG. CO.												
Wood worker	38	"	"	m	1	1			2	26	26	other business
"	36	"	"	m	4	4	1		5	51	1	holidays
"	25	"	England	m	1	1			2	49	3	laid off
"	37	"	U. S.	m	1	1	1		2	43	9	sick and laid off
"	32	"	"	m	3	3	1		4	50	2	vacation
Engineer	34	"	"	m	2	2	1		3	52		
Wood worker	42	"	Canada	m	1	1			1	49	3	laid off
"	31	"	U. S.	m	1	1			2	49	3	vacation
"	39	"	England	m	2	2	1		3	38	14	no work
"	48	"	U. S.	m					1	51	1	holidays
"	34	Sweden	Sweden	m	2	2	1		3	48	4	laid off, vacation & sick
"	34	U. S.	U. S.	m					1	50	2	laid off
Laborer	28	"	England	m					1	51	1	holidays
Sawyer	30	"	U. S.	m	1	1			2	48	4	laid off
Wood worker	43	"	"	m					1	49	3	laid off and vacation
Millwright	55	"	"	m	2	1			2	51	1	holidays

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 25	\$369 75		\$369 75	\$355	\$350	\$100	\$14								\$50	\$300
12 00	612 00	\$150	762 00	462	2000	300	300					1	\$5 00		400	2500
7 50	367 50		367 50	292	410	410									2	50
7 50	367 50		367 50	292	600	300									8	500
10 50	409 50		409 50	409	500	200						1	5 00		18	400
6 00	294 00	43	342 00	342					\$10 00							500
8 00	408 00		408 00	408					7 00							1000
8 50	483 50		483 50	433					6 00					46		100
8 25	313 50		313 50	233				\$75	6 00							850
10 00	480 00		480 00	480					4 00					3		200
10 00	520 00		520 00	495	950	225	25							8		1000
6 50	277 20	40	317 20	317					2 33					3	15	100
12 00	468 00		468 00	168				300	8 00							900
8 00	312 00		312 00	262				50	6 00							200
10 50	483 00	575	1058 00	758	1000	850	300							8	80	1800
12 00	552 00		552 00	452	4500			100							37	6000
15 00	765 00		765 00	715				50	8 00							800
10 00	500 00		500 00	500					6 00							200
15 00	720 00	17	737 00	527	1000	400	160	50								1200
16 50	792 00		792 00	592				200	9 00		\$1000	1	5 00		39	1000
8 50	357 00		357 00	307	800	100	50				1000	1	5 00			1000
13 00	637 00		637 00	497	1200	400	140				3000					1000
7 00	329 00		329 00	304				25								
7 00	301 00		301 00					25								100
9 00	423 00		423 00						\$3 00							50
10 00	500 00		500 00					30		3 00						350
5 00	255 00		255 00					*		*					1	
7 50	375 00		375 00					50		8 00						100
13 00	650 00		650 00							3 50						
9 00	432 00		432 00						3 00							
10 00	390 00		390 00					43		8 50						
7 00	336 00		336 00					30		3 50						50
5 50	121 00		121 00							8 00						80
5 00	195 00		195 00	195					5 00							
6 00	132 00		132 00	132					free							
15 00	390 00		390 00	900					12 50		5000	1	5 00			1800
10 50	535 50		535 50	535					8 33							200
9 00	441 00		441 00	866				75	6 00							500
10 50	451 50		451 50	401				50	10 00							600
10 00	500 00	65	565 00	565					10 00		50					
12 00	624 00		624 00	524				100	9 00							600
10 00	490 00		490 00	815				175	6 00							400
9 00	441 00		441 00	341	1000	400	100				1000	2	10 00			800
8 00	304 00	800	604 00	434	2500		20	150								4500
10 00	510 00		510 00	510					10 00							400
9 00	432 00		432 00	359	1800	500	37	35							32	1800
10 00	500 00		500 00	435				65	5 00		250					115
10 00	510 00		510 00	430	650	600	80									200
10 50	504 00		504 00	504					8 00							200
10 00	490 00	192	682 00	532	700	130	150									1000
13 00	663 00	50	713 00	563				150	7 00		200					1000

* Lives at home and gives wages to parents.

TABLE No. 4.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Painter	39	U. S.	Holland	m	1	1			2	52		
Wool worker	36	"	Scotland	m	3	3			4	38	14	no work
Carpenter	49	Germany	Germany	m	3	3			4	49	3	laid off
Laborer	15	U. S.	U. S.	s						48	4	"
"	16	"	"	s						50	2	no work
Wood worker	14	Holland	Holland	s						50	2	sick
"	14	U. S.	U. S.	s						50	2	holidays and laid off
"	18	"	"	s						48	4	laid off
"	17	"	"	s						43	9	sick and no work
Laborer	18	Holland	Holland	s						49	3	laid off
"	14	U. S.	U. S.	s						50	2	"
Zinc crimp	19	"	Germany	s						51	1	accident
Wood worker	16	"	U. S.	s						51	1	holidays
Zinc crimp	19	"	"	s						50	2	sick and holidays
Wood worker	33	"	"	s				1	1	48	4	laid off
"	16	"	"	s						41	11	no work
"	27	"	"	s						50	2	laid off
"	16	"	"	s						43	9	no work and accident
"	28	Norway	Norway	s						49	3	sick and holidays
"	19	U. S.	U. S.	s				2	2	51	1	holidays
"	18	"	"	s						44	8	laid off
"	21	"	Holland	s						26	26	no work
"	23	"	Norway	s						49	3	laid off and holidays
KALAMAZOO R. R. VELOCIPEDS AND CAR CO.												
Machinist	34	Canada	Ireland	m	5	5	3		6	47	5	laid off
"	38	U. S.	U. S.	m	2	2	2		3	51	1	accident
Laborer	29	"	"	m	2	2			3	52		
"	55	"	"	m	2	1			2	35	17	out of work
Blacksmith	37	Germany	Germany	m	1	1	1		2	51	1	holidays
Iron worker	36	U. S.	U. S.	m	1	1			2	48	4	sick
Machinist	21	"	"	m					1	39	13	laid off
"	45	"	"	m	2	2	1		3	48	4	"
Laborer	20	"	"	m					1	46	6	
Painter	30	"	"	m	1	1	1		2	52		
Machinist	27	"	"	m					1	52		
Wood worker	34	"	"	m	2	2	1		3	51	1	holidays
"	47	"	"	m	2	2	2		3	51	1	"
"	36	"	"	m					1	51	1	"
"	35	"	"	m					1	51	1	"
Blacksmith	60	"	"	m				1	2	43	9	out of work
Machinist	39	Scotland	Ireland	m	6	6	3		7	51	1	holidays
"	48	U. S.	U. S.	m	1	1			2	50	2	vacation
Wood worker	40	"	"	m	1	1	1	1	3	21	31	sick
"	45	"	"	m	1	1	1		2	48	4	laid off
"	29	"	"	m	2	2			3	36	16	out of work
Machinist	22	"	"	s						50	2	laid off
Laborer	50	"	"	s						39	13	out of work
Wood worker	36	"	"	s						31	21	out of work and sick
Painter	21	Canada	Canada	s						35	17	out of work
Wood worker	21	U. S.	Ireland	s						50	2	laid off and vacation
Machinist	23	England	England	s						49	3	"
"	22	"	"	s						51	1	holidays
"	20	Ireland	Ireland	s						48	4	laid off and vacation
"	36	U. S.	"	s						35	17	out of work

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born. No. of years in United States.	If foreign born. amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total Annual income.		If owing home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$9 00	\$468 00	\$68	\$536 00	\$486	\$1000	\$400	\$50		\$10 00		\$1050	2	\$10 00		\$1000
12 00	456 00		456 00	456			456								500
9 00	441 00		441 00	266	700	50	175							16	\$50
3 00	144 00		144 00					\$16							800
8 00	150 00		150 00					20		†					150
8 00	150 00		150 00					*						8	
8 00	150 00		150 00					*		*					
7 00	396 00		396 00					*		*					
7 00	801 00		801 00					*		*					
4 50	220 50		220 50					*		*				1	
5 00	250 00		250 00												
7 00	357 00		357 00					100		\$3 00					250
3 00	153 00		153 00					15		3 00					
7 25	362 50		362 50					30		2 75					300
10 00	430 00		430 00							5 00					
4 50	184 50		184 50							3 00					
9 00	450 00		450 00							3 50					100
3 50	150 50		150 50					40		1 00					
10 00	490 00		490 00							3 60	2000			18	200
10 00	510 00		510 00	480				30	11 00						200
6 00	264 00		264 00							3 25					
7 50	195 00		195 00							3 50					75
12 00	558 00		558 00					150		4 00					1000
7 50	352 50	100	452 50	452					6 00					22	150
12 00	612 00		612 00	587				75	10 00						800
8 00	416 00		416 00	416	700	350					2000				500
7 50	262 50		262 50	262					5 00						75
10 50	535 50		535 50	535					6 50		600	1	5 00	14	150
10 50	504 00		504 00	424	1800	80	80				800				1800
7 25	292 75		292 75	292					7 50						175
10 50	504 00		504 00	544					8 00						150
7 50	345 00		345 00						5 00						100
18 00	986 00	280	1216 00	816	900		200	200							2500
9 00	468 00		468 00	468	1700				free			1	10 00		1900
6 00	306 00		306 00	306											1000
9 00	459 00		459 00	309	1200	600	150				2000				900
9 00	459 00		459 00	409	800	405	50								500
10 50	535 50		535 50	435				100	6 00						800
12 50	580 50		580 50	630					8 50						700
10 00	510 00		510 00	490				20	7 00					8	20
10 50	525 00	240	765 00	765					15 00		50	1	5 00		2000
9 00	189 00		189 00	189					9 00						
9 00	432 00		432 00	432	1200										1500
10 50	378 00		378 00	358				20	6 00						550
8 25	412 50	4	416 50					75		3 50					200
3 00	117 00		117 00							8 00					1000
7 50	232 50		232 50							3 50				7	15
7 50	262 50		262 50							3 00					40
9 50	475 00		475 00					90		2 50					200
11 00	539 00		539 00					50		4 00				4	
9 50	484 50		484 50					50		4 00				8	
8 00	284 00		284 00					4		7 00					80
12 00	420 00		420 00					100		4 00					250

* Lives at home and gives wages to parents. † Lives at home and pays no stated amount for board.

TABLE No. 4.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	21	U. S.	Ireland	s						25	17	out of work
"	35	"	U. S.	s				1	1	51	1	holidays
"	19	"	"	s						35	17	vacation
WM. E. HILL & Co.												
Machinist	34	"	Holland	m	1				1	49	3	holidays and vacat'n
Engineer	36	"	U. S.	m	1	1	1		3	50	2	laid off and sick
Machinist	26	Scotland	Scotland	m	2	2			4	49	3	accid't, sick & holidays
"	26	U. S.	U. S.	wr	1	1			1	49	3	holidays and vacat'n
"	29	"	"	m	2	2			4	50	2	sick and holidays
"	35	Ireland	Ireland	m	2	2	1		3	48	4	"
"	32	U. S.	U. S.	m	1				1	51	1	holidays
"	36	"	"	m	1	1			2	50	2	sick and holidays
"	27	"	England	m	1				1	50	2	holidays and sick
"	24	Holland	Holland	m	1	1			2	50	2	laid off and holidays
"	32	Germany	Germany	m	1	1	1		3	48	4	sick and laid off
"	27	U. S.	U. S.	m	1	1			2	50	2	sick and vacation
Blacksmith	42	"	"	m	1	1	1		3	50	2	laid off and holidays
Molder	34	"	"	m	1	1	1		3	50	2	sickness
Laborer	28	"	England	m				1	1	50	2	holidays and laid off
Molder	38	Germany	Germany	m	2	2			4	49	3	sickness in family
"	31	U. S.	U. S.	m	2	2	1		5	51	1	holidays
"	17	"	"	s						51	1	"
"	30	"	Ireland	s						30	13	no work and accide't
Machinist	30	"	U. S.	s						49	3	laid off and holidays
Blacksmith	28	Ireland	Ireland	s						50	2	vacation
PENINSULA CARRIAGE CO.												
Wood worker	17	U. S.	U. S.	s						29	13	out of work
"	22	Holland	Holland	s				1	1	52		"
"	25	U. S.	U. S.	s						87	15	out of work
"	34	"	England	s						39	13	"
Laborer	16	"	U. S.	s						52		"
Wood worker	24	"	"	s						37	15	out of work
Laborer	50	Germany	Germany	s						43	9	"
Wood worker	51	U. S.	U. S.	m	3	3	2		4	26	26	"
"	36	"	"	m	4	4	3		5	42	10	laid off
"	23	"	"	m	1	1			2	26	25	out of work
"	32	"	"	m	1	1	1		3	46	6	"
"	36	"	"	m	2	2			3	22	30	sick
Laborer	38	"	"	m	3	3	3		4	43	10	out of work
"	40	"	Ireland	m	5	5	4	1	7	52		"
Wood worker	23	"	U. S.	m					1	49	3	laid off
Machinist	54	"	"	m	6	6	4		7	37	15	out of work
Carpenter	49	Germany	Germany	m	4	4	2		5	43	9	"
Wood worker	51	U. S.	U. S.	m	2	1	1		2	50	2	"
"	27	"	Germany	m	1	1		1	3	45	7	laid off
"	41	"	U. S.	m	2	2	1		3	26	26	out of work
Engineer	44	"	"	m	1	1	1		3	31	21	"
THOS. CLARAGE & SON.												
Machinist	37	"	Germany	m	1	1			2	48	4	laid off
Laborer	41	Holland	Holland	m	5	5	2		6	49	3	"
Blacksmith	53	"	"	m	1				1	49	3	"
Machinist	51	"	"	wr	1	1			1	51	1	holidays

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost, per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$420 00		\$420 00							\$2 50						\$45
9 00	459 00		459 00	\$409				\$50 60	\$10 00	†					150	75
9 00	815 00		815 00													
15 00	735 00	\$30	755 00	590				175	12 00							2000
10 00	500 00		500 00	500					11 00		\$2000	1	36 00		600	
7 20	352 80		352 80	352					6 50						400	
18 00	637 00		637 00	787										13	25	
8 40	420 00		420 00	420					8 00		1000	1	5 00		200	
7 80	374 40		374 40	349	\$700	\$200	\$25									400
10 20	520 20		520 20	300	800	800		220						18	700	
12 00	600 00		600 00	500				100	8 00						800	
18 00	660 00		660 00	850				300	8 00						1000	
12 00	600 00		600 00	400				200	10 00		2000	1	5 00	19	350	
7 50	360 00		360 00	250	1000	400	110									1000
7 80	390 00		390 00	390					10 00					15	800	
16 50	825 00		825 00	675	1500	600	150								1300	
10 50	525 00	50	575 00	475	1400	400	100								2000	
7 50	375 00		375 00	351	600	549	24								250	
10 50	514 50		514 50	389	700			125								900
15 00	765 00		765 00	665	1000	500	100							34	1000	
4 50	229 50		229 50							1 25						
10 00	360 00	200	560 00					300		4 00	100	1	5 00		2500	
9 00	441 00		441 00					300		2 50					600	
12 00	600 00		600 00					180		4 00				28	300	
7 50	292 50		292 50					*		*						
8 00	416 00		416 00	416						†	2000			11	150	
9 80	362 80		362 80							3 50					50	
9 00	351 00		351 00							3 00					100	
4 50	234 00		234 00							3 00						
9 00	333 00		333 00					50		3 75					100	
7 00	301 00		301 00							3 00				8	25	
6 00	156 00	130	286 00	286					7 00						200	
10 00	420 00		420 00	390	900	400	30								600	
9 00	284 00		284 00	284					7 50						750	
12 00	552 00		552 00	402				150	10 00		1000	1	5 00		1000	
6 00	132 00		132 00	282					6 50						250	
9 00	378 00		378 00	278	900	450	100				1000	1	5 00		800	
8 00	416 00		416 00	341	800	325	75				2000				650	
10 00	490 00		490 00	490					4 50						90	
7 50	277 50	40	317 50	317	100	29									150	
10 00	481 50	300	781 50	751					10 00					35	200	
13 50	675 00		675 00	612	2500	900	68				2000				5000	
10 00	450 00		450 00	450					10 00						90	
18 50	351 00	450	801 00	601	1000	800	200								3500	
8 40	260 40		260 40	260	1000	200									1500	
8 00	384 00		384 00	384	3000						1050	1	5 00		5000	
6 50	318 50		318 50	318	500	360								3	100	
10 00	480 00		480 00	490	800									22	1000	
18 50	698 50		698 50					200		5 00				35	3000	

* Gives wages to parents and lives at home.

† Lives at home and supports family.

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	47	Germany	Germany	m	5	4	1		5	48	0	sick
"	32	U. S.	U. S.	m	3	3	1		4	50	2	"
"	29	Canada	Canada	m	3	3			3	52		
Laborer	25	N. Zealand	N. Zealand	m	1	1			1	48		
Molder	22	U. S.	Holland	m	2	2			2	48	4	laid off and sick
"	28	"	Germany	m	1	1			2	49	3	laid off and sick
Laborer	37	Scotland	Ireland	m	4	4	4		5	51	1	laid off
Machinist	24	U. S.	Holland	s						50	2	
"	18	"	"	s						46	6	sick and laid off
Laborer	14	Germany	Germany	s						38	26	at school
Molder	27	U. S.	"	s						49	3	laid off and sick
"	26	"	U. S.	s						50	2	vacation
"	19	"	"	s						50	2	laid off
"	44	England	England	s			1		1	50	2	"
"	24	U. S.	Ireland	s						43	9	sick and laid off
D. C. & H. C. REED & Co.												
Laborer	17	Canada	U. S.	s						39	12	out of work
Painter	26	U. S.	"	s						43	4	"
"	23	"	"	s						48	4	"
"	21	Canada	Canada	s						46	6	laid off
"	23	U. S.	Germany	s						43	4	"
Wood worker	21	"	Ireland	s						46	6	sick and laid off
Blacksmith	17	"	"	s						49	3	laid off
"	24	Germany	Germany	s						43	4	"
Laborer	55	Ireland	Ireland	m	6	3	2		4	43	9	out of work
Painter	27	U. S.	U. S.	m			1		2	43	9	laid off
Wood worker	36	"	"	m	4	4	3		5	50	2	"
"	28	"	Ireland	m	1	1	1		2	51	1	holidays
Painter	21	"	Canada	m					1	50	2	laid off
"	42	Ireland	Ireland	m	3	3	1		4	49	3	sick
"	51	U. S.	U. S.	m					1	31	21	out of work
"	47	"	"	m	2	2	1		3	31	21	sick
Laborer	31	"	"	m	2	2	1		3	51	1	laid off
Wood worker	41	"	"	m	7	6	2		7	48	4	sick and laid off
"	28	"	"	m	2	2			3	39	13	"
Painter	34	"	Germany	m	3	3	2		4	51	1	laid off
"	"	"	England	m								
Engineer	41	Canada	U. S.	m					1	27	25	in bus. for self & laid off
Blacksmith	38	U. S.	"	m	5	5	3		6	39	12	sick and laid off
Laborer	40	"	"	m	2	2	2		3	48	4	sick
THE PHELPS & BIGELOW WINDMILL CO.												
Laborer	17	U. S.	Holland	s						40	12	laid off
Machinist	22	"	U. S.	s						39	13	sick
"	22	"	"	s						46	6	laid off
"	25	"	Germany	s						43	9	laid off and sick
"	15	"	U. S.	s						31	21	laid off and at school
Blacksmith	45	Holland	Holland	s						31	21	out of work
Wood worker	50	England	England	m	1	1			2	50	2	laid off
"	29	U. S.	Germany	m	2	2	1		3	43	9	sick and laid off
"	29	"	U. S.	m	1	1			2	47	5	laid off
"	50	Holland	Holland	m	2	1	1		2	46	6	sick and laid off
Laborer	22	Ocean	"	m					1	51	1	holidays
Painter	49	U. S.	U. S.	m					1	45	7	laid off and out of work
"	34	"	"	m	2	2	1		3	48	4	laid off

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$516 00	---	\$516 00	\$391	\$900	\$775	\$125	---	---	---	\$2050	1	\$5 00	12	\$50	\$500
10 00	500 00	---	500 00	500	500	---	---	---	---	---	1000	---	---	---	---	1500
15 00	780 00	\$18	798 00	798	798	---	---	---	\$10 00	---	---	---	---	---	---	400
6 00	312 00	---	312 00	312	---	---	---	---	4 50	---	---	---	---	---	---	300
10 50	504 00	---	504 00	554	---	---	---	\$150	6 00	---	---	---	---	23	---	200
18 50	661 50	40	701 50	126	---	---	---	275	9 00	---	500	1	5 00	---	---	1550
10 50	535 50	---	535 50	535	---	---	---	---	6 00	---	---	---	---	38	---	400
9 00	450 00	---	450 00	---	---	---	---	---	---	\$8 00	---	---	---	---	---	75
6 00	276 00	---	276 00	---	---	---	---	40	---	4 00	---	---	---	---	---	100
3 00	78 00	---	78 00	---	---	---	---	---	---	2 00	---	---	---	---	---	---
10 50	514 50	40	554 50	---	---	---	---	140	3 75	500	1	5 00	---	---	---	1500
12 00	600 00	---	600 00	---	---	---	---	---	3 50	---	---	---	---	---	---	300
7 50	375 00	---	375 00	---	---	---	---	---	3 50	---	---	---	---	---	---	50
10 50	525 00	---	525 00	---	---	---	---	55	4 00	50	1	5 00	---	40	---	350
18 50	580 50	---	580 50	---	---	---	---	100	4 00	---	---	---	---	---	---	200
4 50	175 50	---	175 50	---	---	---	---	---	↑	---	---	---	---	10	---	---
8 00	384 00	---	384 00	---	---	---	---	---	3 50	---	---	---	---	---	---	50
8 00	384 00	---	384 00	---	---	---	---	---	3 50	---	---	---	---	---	---	20
10 00	480 00	---	480 00	---	---	---	---	---	3 50	---	---	---	---	---	---	45
7 40	355 20	---	355 20	---	---	---	---	---	3 50	---	---	---	---	15	---	25
7 50	345 00	---	345 00	---	---	---	---	52	3 00	---	---	---	---	---	---	50
7 50	367 50	---	367 50	---	---	---	---	---	4 00	---	---	---	---	---	---	---
7 50	360 00	---	360 00	---	---	---	---	---	3 50	---	---	---	---	---	---	25
3 00	344 00	72	416 00	273	1000	400	148	---	---	---	---	---	---	6	---	25
3 00	344 00	---	344 00	312	---	---	---	32	---	---	---	---	---	29	40	1400
8 00	400 00	---	400 00	---	---	---	---	---	---	---	---	---	---	---	---	100
7 60	387 60	---	387 60	372	900	850	28	---	---	---	---	---	---	---	---	700
7 00	350 00	---	350 00	338	1200	700	49	---	---	---	---	---	---	---	---	700
12 00	588 00	---	588 00	568	---	---	---	---	8 00	---	---	---	---	---	---	50
7 00	217 00	306	523 00	468	1000	1500	60	---	---	2000	---	---	---	24	30	1500
5 00	155 00	51	206 00	286	---	---	---	---	---	---	---	---	---	---	---	4000
8 00	408 00	---	408 00	308	800	---	---	---	6 00	---	---	---	---	---	---	200
8 00	384 00	---	384 00	384	1000	---	100	---	---	---	---	---	---	---	---	1000
10 00	390 00	---	390 00	390	---	---	---	---	7 00	---	---	---	---	---	---	1280
7 50	382 50	35	417 50	492	1200	---	---	---	---	---	1	5 00	---	---	---	500
7 50	202 50	---	202 50	812	---	---	---	33	6 00	---	---	---	---	---	---	1800
17 00	663 00	---	663 00	663	---	---	---	---	9 50	---	---	---	---	30	---	1600
8 00	384 00	---	384 00	384	---	---	---	---	7 50	---	---	1	2 00	---	---	200
5 50	220 00	---	220 00	---	---	---	---	---	---	---	---	---	---	---	---	100
28 00	812 00	---	812 00	---	---	---	---	---	---	---	---	---	---	---	---	---
5 00	220 00	---	220 00	---	---	---	---	---	---	---	---	---	---	---	---	---
9 00	887 00	---	887 00	---	---	---	---	---	---	---	---	---	---	---	---	---
4 50	139 50	---	139 50	---	---	---	---	---	---	---	---	---	---	---	---	---
10 50	325 50	---	325 50	---	---	---	---	---	---	---	---	---	---	---	---	---
10 50	525 00	---	525 00	408	1500	---	50	70	---	---	---	---	---	6	---	200
9 00	387 40	---	387 00	387	---	---	---	---	7 00	---	---	---	---	39	---	2500
8 50	399 50	---	399 50	399	---	---	---	---	8 00	---	---	---	---	---	---	450
8 50	391 00	---	391 00	300	1500	500	91	---	---	---	---	---	---	33	200	150
9 00	459 00	---	459 00	359	---	---	---	---	---	---	---	---	---	---	---	1200
8 00	390 00	---	390 00	390	---	---	---	---	7 00	---	---	---	---	22	---	250
9 00	432 00	10	442 00	292	1800	---	80	80	5 00	---	---	---	---	---	---	100
																2100

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 4.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker.	33	U.S.	Germany	m	2	2	1		3	50	2	laid off and holidays
"	31	"	"	m	3	3		1	2	48	4	laid off
"	32	"	U.S.	m	3	3			4	45	7	laid off and sick
Shipping clerk	24	"	"	m	1	1			2	49	3	sick and vacation
Machinist.	45	"	England	m	1	1			1	43	9	laid off
"	24	"	Germany	m	2	2			1	48	4	"
Blacksmith.	35	England	England	m	2	2	1		3	35	14	accident and laid off
Teamster.	45	Holland	Holland	m	2	2			3	51	1	laid off
Machinist.	23	U.S.	Germany	m	1	1			1	46	6	"
KALAMAZOO CARRIAGE WORKS.												
Blacksmith.	25	U.S.	Scotland	m	2	2			3	51	1	holidays
Wood worker.	40	Canada	Ireland	m	5	5	3		6	51	1	"
Painter.	32	U.S.	"	m					1	43	9	sick and laid off
"	18	"	Holland	s						48	4	laid off
L. CAHILL & Co.												
Blacksmith.	35	"	Canada	m	6	6	4		7	51	1	holidays
Painter.	26	"	U.S.	m	1	1			2	50	2	laid off and sick
"	30	Holland	Holland	m	3	3			4	50	2	holidays and laid off
"	34	"	"	m	1	1	1	1	3	50	2	laid off
Machinist.	53	U.S.	U.S.	m	3	3			4	32	20	sick
Laborer.	49	Holland	Holland	m	6	6	4		7	44	8	sick and laid off
Molder.	44	Canada	U.S.	m	2	2	2		3	13	39	no work
Machinist.	53	U.S.	"	m	2	2			1	45	4	laid off
Blacksmith.	30	Canada	Canada	m	1	1	1		2	31	21	no work
Engineer.	37	U.S.	U.S.	m	2	2	2		3	49	3	"
Laborer.	35	"	Switz.	m	4	4	1		5	39	12	laid off and sick
Blacksmith.	26	"	Ireland	s						31	21	no work
Machinist.	23	"	Holland	s				2	2	44	8	vacation
NEWTON CARRIAGE CO.												
Painter.	28	Germany	Germany	m	1	1			2	39	13	laid off and sick
"	51	U.S.	U.S.	m	3	2	1		3	50	2	holidays
"	20	"	"	m					1	50	2	"
Wood worker.	33	"	"	m					1	51	1	"
Trimmer.	35	"	"	m	2	2	1		3	50	2	no work
Blacksmith.	38	"	"	m					1	43	9	laid off
"	24	"	Canada	m					1	43	9	"
"	27	"	Ireland	m	1	1			2	44	8	"
Wood worker.	43	"	U.S.	m	2	2			3	48	4	vacation
Blacksmith.	18	Ireland	Ireland	s						34	18	no work and sick
"	22	U.S.	U.S.	s						26	26	laid off and vacation
Machinist.	19	"	"	s						48	4	laid off
Trimmer.	20	"	Germany	s				1	1	43	9	"
Wood worker.	22	"	U.S.	s						43	9	"
"	20	"	"	s						50	2	holidays and laid off
HARROW SPRING CO.												
Laborer.	21	"	England	s						39	13	laid off
"	21	"	Holland	s						35	17	"
Steel worker.	36	"	U.S.	s						35	17	"
Laborer.	24	England	England	s						39	13	"

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, an't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$375 00	\$52	\$427 00	\$347	\$700	\$400	\$80									\$400
10 00	480 00		480 00	480	800	800	120									700
7 50	387 50		387 50	387	800	800	120									250
10 00	490 00		490 00	490	800	800	80									570
9 00	387 00		387 00	387	900	680	150									300
10 50	504 00	60	564 00	389				\$175	free		3000					700
10 00	390 00		390 00	450					7 00		2000			7	\$100	550
8 00	408 00		408 00	388	1100		25							18		1200
7 50	345 00		345 00	315				50	9 00							175
10 50	535 50		535 50	535					7 00							350
12 50	688 50		688 50	598				100	8 00		1000			20	5	600
13 00	559 00		559 00	459				100	10 00							175
7 50	360 00		360 00				25			\$3 00						
10 50	585 50		585 50	525	600		10									900
8 00	400 00		400 00	400					8 00							150
8 00	400 00		400 00	358	900	600										500
15 00	750 00		750 00	625	1500		42	100						9		2000
10 50	396 00		396 00	396			25		6 00		1000			23		500
9 00	396 00	100	496 00						5 00					16		200
12 50	175 50		175 50	500					15 00					28		5000
15 00	720 00		720 00	800	2000			420			2000					4000
30 00	620 00		620 00	370			50	250	10 00		2000			22		800
10 00	490 00		490 00	440	1000						2000	1	\$10 00			1500
8 10	315 90		315 90	315	400	200				\$ 50						800
12 00	372 80		372 00													100
12 00	528 00		528 00	424				104	10 00							500
7 00	278 00		273 00	273					7 00		1000			10		200
10 00	500 00		500 00	320	800	450	180				1000					700
10 00	500 00		500 00	500												200
12 00	612 00		612 00	412	1000	500	200									700
16 00	800 00		800 00	700				100	9 00		2000					400
15 00	645 00		645 00	495				150	12 00							600
9 00	387 00		387 00	258	700	350	34	100								700
13 50	584 00		594 00	519				75	10 00							500
9 00	432 00		432 00	332				100	8 00		2000	1	5 00			500
5 25	178 50		178 50					25		\$ 25						
10 50	278 00		273 00						3 00							25
7 50	360 00		360 00					52	3 25							100
6 78	290 68		290 68	140				150								250
6 00	358 00		258 00					50	3 00							80
9 00	450 00		450 00					100	3 00							200
9 00	351 00		351 00						2 50							100
9 00	315 00		315 00					60	3 00							400
9 00	315 00		315 00						3 50							10
9 00	351 00		351 00						3 50					8	60	50

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	20	U. S.	Germany	s						26	26	laid off and no work
Steel worker	22	"	U. S.	s				1	1	45	7	accident
"	22	"	"	s						42	10	laid off
"	20	"	Holland	s						46	6	laid off and sick
"	20	"	"	s				2	2	46	6	"
"	19	"	Germany	s						32	20	vacation
"	32	"	England	m	1	1			2	43	9	accident and laid off
Laborer	30	Canada	Canada	m	1	1	1		3	48	4	laid off
Grinder	26	U. S.	U. S.	m	1	1		1	2	39	13	"
"	34	"	"	m	2	2		1	4	42	10	laid off and sick
Tester	36	"	"	wt	2	2	2		2	35	17	laid off
Steel worker	31	"	"	m				2	3	46	6	laid off and sick
"	23	"	"	m				1	1	43	9	"
"	23	"	"	m	1	1			2	44	8	laid off
"	27	"	"	m	3	3	1		4	43	9	"
"	40	"	Germany	m				2	3	51	1	sick
KALAMAZOO FOUNDRY & MACHINE CO.												
Blacksmith	43	Germany	Germany	m	4	4	3		5	52		
Machinist	40	U. S.	U. S.	m	2	2			3	46	6	sick and vacation
"	35	"	"	wt	1	1	1		2	52		
"	50	"	"	m	1	1			2	49	3	holidays and laid off
Laborer	47	"	"	m	1	1			1	50	2	laid off
"	67	Germany	Germany	m	2	2	1		3	36	13	"
Molder	40	Canada	Wales	m	3	3	3		4	47	5	"
"	21	Ireland	Ireland	s						36	13	sick and laid off
"	27	U. S.	England	s				1	1	45	9	laid off
"	26	"	Germany	s						45	9	out of work
Machinist	27	"	U. S.	s						10	42	going to college
Core maker	17	"	Holland	s						39	13	out of work and laid off
Machinist	16	"	Germany	s						49	3	sick and holidays
"	13	"	U. S.	s						30	22	worked on farm
PAGE MFG. CO.												
Wood worker	17	"	Holland	s						35	17	laid off
"	14	"	"	s						50	2	"
Sawyer	19	"	"	s						42	10	"
Wood worker	20	"	Canada	s						47	5	"
"	19	Germany	Germany	s						50	2	"
"	18	U. S.	U. S.	s						48	4	"
"	21	Germany	Germany	s						50	2	shut down
"	39	U. S.	U. S.	m	3	3			4	50	2	"
Engineer	53	"	"	m	1	1		1	2	53		
Laborer	27	Holland	Holland	m	2	2			3	51	1	laid off
"	40	U. S.	U. S.	wt	1	1			1	39	13	out of work
"	50	Holland	Holland	m	6	6	2		7	49	3	laid off
"	37	"	"	m	3	3	1		4	35	17	out of work
Machinist	42	U. S.	England	m	4	4	1		5	48	9	sick
Sawyer	33	"	Ireland	m	5	5	3		6	47	5	laid off and vacation
Wood worker	25	Germany	Germany	m	1	1			2	48	4	shut down and vacation
"	29	U. S.	U. S.	m	1	1	1		2	50	2	laid off
Teamster	50	England	England	m	4	4	4	1	6	35	17	out of work
Wood worker	43	U. S.	U. S.	m	2	2	1		3	48	4	laid off

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning a home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$195 00		\$195 00							\$3 00						\$75
9 00	405 00		405 00	\$405						6 00						75
9 00	378 00		378 00							3 00						160
9 00	414 00		414 00					\$40		3 50						30
11 00	506 00		506 00							4 00						30
8 00	256 00		256 00							3 00						100
12 50	580 50		580 50	350				230	8 00							3000
9 00	432 00		432 00	452					6 00							160
9 00	351 00		351 00	260				91	6 00					11		200
9 00	378 00		378 00	278					9 00							300
7 50	262 50		262 50							2 50						
12 11	557 00		557 00	557					8 00							100
9 00	387 00		387 00	312				75	6 00							300
10 00	440 00	\$72	512 00	412	\$500	\$280	\$100									2000
10 00	480 00		480 00	390	600	200	50									500
10 00	510 00		510 00	360				150	10 00			1	\$10 00			1000
8 00	416 00	180	596 00	446	600		150							20	\$20	750
15 00	690 00		690 00	1000	2500	500	40				\$1000	2	15 00			3000
15 00	780 00		780 00	780	2500						50	2	15 00			2500
10 50	514 50		514 50	474				40	8 00		2000	1	5 00			500
8 00	400 00		400 00	375				25	5 00							10
7 00	273 00	206	481 00	481	1000									\$7	200	2700
14 40	676 80		676 80	626	600		50							15	50	900
7 00	273 00		273 00											8		25
12 00	516 00		516 00					100								500
7 50	75 00		75 00								1000					
4 00	156 00		156 00													
4 50	220 50		220 50													
3 00	90 00		90 00													100
3 50	122 50		122 50													
3 25	162 50		162 50													
7 00	294 00		294 00													
4 00	186 00		186 00													
6 00	390 00		390 00					75		8 00				18		100
3 60	172 80		172 80					40								
8 50	425 00		425 00					100		8 00				18		200
10 50	525 00		525 00	350	1800	400	175									2500
10 00	520 00		520 00	420	1200	400	100									900
7 50	392 50		392 50	232				160	6 00					23		250
7 50	292 50		292 50	232	500	100	60									600
7 50	367 50		367 50	297	600	200	70							20		600
7 50	262 50		262 50	262	800	300								8		700
8 50	385 50	120	485 50	385	800		100									1000
9 00	423 00		423 00	323	800		100									1500
10 00	480 00		480 00	280	1200	900	150				2000	1	5 00	18		500
9 00	450 00		450 00	250	800	300	200									800
7 50	262 50		262 50	262					6 00					40		100
10 00	480 00	75	555 00	430	1200		25	100								3000

* Lives at home and gives wages to parents.

Lives at home and pays no stated amount for board.

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
L. C. LULL & Co.												
Spring maker	28	U. S.	U. S.	w'r				2	2	37	15	out of work
Iron worker	34	"	"	w'r						35	17	"
Laborer	40	"	"	m	4	4	2		5	39	13	sick
Spring maker	28	"	"	m	3	3	3		4	37	15	out of work
Shipping clerk	32	"	Ireland	m	2	2			2	43	9	"
Spring maker	30	"	Canada	m	3	3	2	1	5	39	13	out of work & accident
Blacksmith	27	"	Ireland	m	1	1		1	1	51	1	holidays
Iron worker	19	"	U. S.	s						39	13	sick
Painter	29	"	Holland	s						43	9	sick and laid off
"	26	Holland	"	s				2	2	31	21	vacation
Spring maker	21	U. S.	U. S.	s						16	36	out of work
Laborer	18	"	"	s						31	21	"
THE LAWRENCE & CHAPIN CO.												
Spring tester	18	Holland	Holland	s						10		first work in U. S.
Machinist	19	U. S.	Germany	s						43	9	sick and vacation
"	19	"	U. S.	s						43	9	sick and holidays
Pattern maker	45	Canada	Scotland	m	2	2	2		3	52		
Blacksmith	28	Holland	Holland	m	3	3			4	46	6	out of work and laid off
"	50	"	"	w'r	2	2	1		2	51	1	holidays
Molder	44	Scotland	Scotland	m	6	5	2		6	39	13	laid off
Engineer	52	U. S.	U. S.	m	1				1	51	1	holidays
GEO. CLARK.												
Molder	15	Scotland	Scotland	s						35	17	at school
Core maker	14	"	"	s						51	1	sick
Molder	13	U. S.	U. S.	s						48	4	laid off and sick
"	19	Ireland	Ireland	s						35	17	sick
Machinist	19	U. S.	Holland	s						49	3	sick and laid off
Molder	18	Scotland	Scotland	s						48	4	"
"	16	"	"	s						81	21	"
Machinist	20	U. S.	U. S.	s						39	13	laid off
Molder	36	"	"	m	2	2			3	46	6	sickness
Laborer	29	"	"	m	1	1	1		2	43	9	sick and laid off
Molder	30	"	"	w'r	1	1	1		1	35	17	"
"	20	"	Holland	m					1	49	3	sick and vacation
"	40	Scotland	Scotland	m	3	3			4	48	4	laid off
Engineer	43	U. S.	U. S.	m	5	5	2	1	7	52		
Teamster	65	"	"	m	5	2	2		3	52		
Machinist	37	"	"	m	3	3	1		4	50	2	sick
SMITH & POMEROY.												
Machinist	21	"	"	s						49	3	laid off
"	20	Holland	Holland	s						51	1	holidays
Painter	21	"	"	s						30	22	sick and laid off
Machinist	53	U. S.	U. S.	m	1	1	1		2	51	1	holidays
Shipping clerk	31	"	"	m					1	52		
Laborer	28	"	"	m	1	1			2	50	2	holidays and sick
Wood worker	34	"	"	m	1	1			2	43	9	sick and laid off
Carpenter	52	"	"	m	5	5	4		6	51	1	holidays
Painter	26	Holland	Holland	m	1	1			2	50	2	vacation
"	24	U. S.	"	m	4	4			5	50	2	"
Machinist	52	Germany	Germany	m	4				1	48	4	sick and laid off
"	37	U. S.	U. S.	m	1	1	1		2	48	4	sick and vacation

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
8 00	\$222 00		\$222 00	\$222						+						\$600
7 50	262 50		262 50	262 50						\$4 00						75
10 50	408 50		479 50	479 50	479	\$2000	\$250				\$1000					3500
9 00	333 00	\$70	383 00	383 00	318	1200		\$15								1600
8 50	365 50		365 50	365					\$8 00							300
12 00	468 00		468 00	468	1200	300										1300
10 00	510 00		510 00					\$80		3 00						125
6 00	234 00		234 00							3 00						15
6 75	290 25		290 25					25		3 00						300
9 00	279 00		279 00					50		6 00				21		600
9 00	144 00		144 00							3 50						50
4 50	189 50		189 50					50		†						125
4 50	45 00		45 00							*						
4 50	198 50		198 50					100		+						400
6 00	258 00		258 00							3 00						150
12 00	624 00	120	744 00	544	1400	700	200				1000			25		2000
5 00	230 00		230 00	230	650	650								9		400
10 00	510 00	35	545 00	495	2500		50							22	1000	2500
7 50	292 50		292 50	292	1200	750								9	60	600
9 00	459 00		459 00	459					10 00							200
3 00	105 00		105 00					*		*				7		
3 00	158 00		158 00					*		*				1		
3 00	144 00		144 00					*		*						
7 50	262 50		262 50					*		*				2		40
6 00	294 00		294 00					*		*						35
7 50	360 00		360 00					20		5 00				8		
6 00	196 00		196 00							5 00				9		
6 00	234 00	5	239 00					75		3 00						150
8 00	368 00		368 00	368					8 00							125
8 00	344 00		344 00	294	700	500	60									450
9 00	315 00		315 00							4 00						25
10 50	514 50		514 50	379	1150	850	135									350
15 00	720 00		720 00	620				100	9 00		1000			30		500
7 50	390 00	104	494 00	444	1200	500	50				2000					1400
7 50	390 00		390 00	390					12 50							400
10 30	525 00		525 00	525					8 00							550
5 50	245 00		245 00					25		†						50
5 00	255 00		255 00					*		*				5		150
7 50	225 00		225 00					60		3 00				9		185
10 50	585 50	50	585 50	385				200	8 00							400
13 50	702 00	50	752 00					200		8 00	1000					1000
9 00	450 00		450 00	390	1000	700	60		9 00							500
9 50	408 50		408 50	408												300
11 00	561 00		561 00	521	1000		40									1200
10 00	500 00		500 00	400	600	125	100							16		800
10 50	525 00	90	615 00	435	1500	650	130									1000
9 75	468 00		468 00	468					8 00					14	875	200
13 50	648 00	150	798 00	648	1200	450	150				50	1	\$5 00			1250

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 4.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
C. H. DUTTON & Co.												
Boiler maker	19	Holland	Holland	s						49	3	laid off
Machinist	21	U. S.	Germany	s						44	8	laid off and accident
Laborer	17	"	U. S.	s						22	30	at school
Machinist	20	Germany	Germany	s						49	3	laid off and vacation
"	16	U. S.	"	s						43	9	laid off
Boiler maker	24	"	Holland	s				1	1	51	1	holidays
"	24	Holland	"	s						52		
"	24	U. S.	U. S.	m	1	1			2	48	4	vacation
Blacksmith	27	"	"	m	1	1			3	39	13	laid off and sick
Boiler maker	26	Germany	Germany	m				1	2	43	9	laid off
Machinist	34	England	England	m	2	2	1		3	47	5	out of work
Laborer	23	Canada	Canada	m	1	1		1	2	39	13	laid off & out of w ^k
Boiler maker	40	Germany	Germany	m	8	8	3		9	46	6	laid off
STRAIT & PACKARD.												
Machinist	22	U. S.	U. S.	m					1	43	4	sick
Molder	31	"	"	m	2	2			2	45	7	sick and laid off
Machinist	28	"	"	s					2	48	4	laid off
Laborer	16	Holland	Holland	s						43	9	accident & out of w ^k
"	18	U. S.	"	s						26	26	out of work
Machinist	20	"	U. S.	s						50	2	laid off
"	20	"	"	s						51	1	holidays
Core maker	15	"	"	s						51	1	out of work
GODFREY J. BREMER.												
Machinist	17	"	"	s						47	5	sick and laid off
Engineer	16	"	"	s						48	9	out of work
Machinist	18	Germany	Germany	s						52		
"	18	U. S.	U. S.	s						23	29	out of work
Molder	50	Holland	Holland	WT						14	82	"
Machinist	30	Germany	Germany	m	1	1			2	51	1	holidays
Brass finisher	24	U. S.	England	m	1	1			2	52		
Machinist	27	"	Germany	m	1	1			2	52		
WILLIAMS MANUFACTURING Co.												
Finisher	36	U. S.	U. S.	s						43	9	laid off
Painter	20	"	"	s						48	4	"
"	15	"	"	s						23	29	at school
"	29	"	"	m					1	48	4	vacation
Laborer	33	"	"	m	2	2			3	48	4	sick
Wood worker	45	"	"	m	3				1	50	2	laid off and vacation
"	36	"	"	m					1	52		
"	42	"	"	m	3	3	1		4	51	1	holidays
"	40	"	"	WT	5	3	2		3	48	4	sickness in family
"	33	"	"	m					1	46	6	vacation
Teamster	52	"	"	m	4	3			4	52		

TABLE NO. 4.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$367 50		\$367 50					*		*				16		\$50
10 50	462 00		462 00							\$5 00						200
3 00	66 00		66 00							free						
9 00	441 00		441 00					\$150		3 00				17		225
6 00	258 00		258 00							3 50						
12 00	612 00		612 00	\$582				30								100
9 00	468 00		468 00					60						10		100
12 00	384 00		384 00	384					\$8 50	3 00						300
7 50	292 50		292 50	292					5 00							40
13 50	580 50		580 50	580					10 00		\$500	1	\$5 00	7		500
15 00	705 00		705 00	505					10 00		2000			26		3000
7 00	273 00		273 00	273					6 00					5		50
7 50	345 00		345 00	818	\$800	\$212	\$27							7		750
7 50	360 00	\$8	368 00	260				100	10 00							500
12 00	540 00		540 00	445				75	7 00							300
12 00	576 00		576 00	576				*	4 00		100	1	5 00			800
4 00	172 00		172 00							†	50	1	5 00	2		
4 00	104 00		104 00							2 50						
10 50	525 00		525 00					65		3 00						100
7 50	382 50		382 50					100		3 00	1000					200
3 00	153 00		153 00					*		*						
3 50	164 50		164 50					*		*						
3 00	129 00		129 00					*		*						
7 00	364 00		364 00							3 50				7		
6 00	128 00		128 00							3 50						
9 00	126 00		126 00							4 25						
13 50	688 50		688 50	538	1100	400	150				500	2	10 00	46		1000
12 00	624 00		624 00	530				85	10 00	3		1	5 00	9		500
15 00	780 00		780 00	680				150	8 00							1000
12 00	516 00		516 00					250		4 00		1	5 00			1000
7 00	396 00		396 00							3 50						
3 00	69 00		69 00							free						
16 00	768 00	282	1050 00	400	1500	225	800	350								5800
10 50	504 00		504 00	504					8 00							400
9 00	450 00	300	710 00	385	1800	933	125	200								2000
12 00	624 00	350	974 00	640	1200	400	233	100								2000
10 00	510 00		510 00	379	800	600	131				1000	1	5 00			350
10 00	480 00	25	505 00													800
10 00	460 00	35	495 00	245	800	500	250			5 50						1500
10 00	520 00		520 00	520					10 00							300

* Gives wages to parents and lives at home.

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
L. C. & H. L. PRATT & Co.												
Wood worker	18	U. S.	U. S.	s	—	—	—	—	—	29	13	laid off
Painter	16	Holland	Holland	s	—	—	—	—	—	50	2	holidays and laid off
Laborer	21	U. S.	U. S.	s	—	—	—	2	2	46	0	sick
Wood worker	22	"	Germany	s	—	—	—	—	—	51	1	holidays
Wood worker	21	"	U. S.	s	—	—	—	—	—	50	2	laid off
Blacksmith	27	"	"	s	—	—	—	—	—	29	13	sick and laid off
"	23	"	"	m	2	2	1	—	3	48	4	laid off
Wood worker	26	"	"	m	—	—	—	—	1	48	9	out of work
Machinist	42	Canada	"	m	3	3	2	—	4	51	1	holidays
Painter	20	U. S.	"	m	1	1	—	—	2	26	26	out of work
EAMES PULLEY Co.												
Pattern maker	27	"	"	s	—	—	—	—	—	26	26	out of work
Molder	20	"	Holland	s	—	—	—	—	—	39	12	"
Pattern maker	32	"	U. S.	m	2	—	—	—	1	43	4	"
Wood worker	33	"	Canada	m	—	—	—	—	1	43	9	laid off
"	62	"	U. S.	m	2	—	—	—	1	26	26	other business
Blacksmith	50	England	England	m	1	1	1	1	3	26	26	out of work
Laborer	28	U. S.	U. S.	m	1	1	—	—	2	26	26	sick and out of work
Machinist	40	"	"	m	1	1	—	—	2	48	4	out of work
Wood worker	36	England	England	m	1	1	—	—	2	46	4	laid off and sick
"	32	U. S.	U. S.	m	1	1	1	—	3	49	3	out of work
"	30	"	"	m	1	2	—	—	3	48	4	sick and out of work
Molder	56	"	England	m	4	4	3	—	5	26	26	out of work

TABLE No. 4.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
47 50	\$292 50	-----	\$292 50	-----	-----	-----	-----	*	-----	*	-----	-----	-----	-----	-----	-----
2 25	112 50	-----	112 50	-----	-----	-----	-----	*	-----	*	-----	-----	-----	-----	-----	-----
7 50	345 00	-----	345 00	-----	-----	-----	-----	-----	-----	+	-----	-----	-----	-----	-----	-----
12 00	612 00	-----	612 00	\$345	-----	-----	-----	\$200	-----	\$3 00	\$3000	1	\$15 00	-----	-----	\$25
7 50	375 00	-----	375 00	-----	-----	-----	-----	30	-----	3 00	-----	-----	-----	-----	-----	500
7 50	292 50	-----	292 50	-----	-----	-----	-----	75	-----	2 50	-----	-----	-----	-----	-----	75
10 00	450 00	-----	450 00	405	-----	-----	-----	75	-----	\$5 00	-----	-----	-----	-----	-----	100
7 50	322 50	-----	322 50	-----	-----	-----	-----	-----	-----	7 00	-----	-----	-----	-----	-----	150
7 50	382 50	-----	382 50	382	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	300
7 50	195 00	-----	195 00	-----	-----	-----	-----	-----	-----	3 00	50	1	5 00	15	-----	50
13 00	468 00	-----	468 00	-----	-----	-----	-----	-----	-----	4 00	-----	1	5 00	-----	-----	-----
6 00	234 00	-----	234 00	-----	-----	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	25
12 50	648 00	-----	648 00	618	\$3600	-----	\$30	-----	-----	-----	-----	-----	-----	-----	-----	\$700
12 00	516 00	-----	516 00	468	-----	-----	-----	50	8 00	-----	-----	-----	-----	-----	-----	300
12 00	312 00	-----	312 00	312	6000	\$2750	-----	-----	-----	-----	-----	-----	-----	-----	-----	5000
9 00	234 00	-----	234 00	234	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	100
7 50	195 00	-----	195 00	195	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	-----	200
9 00	432 00	-----	432 00	432	-----	-----	-----	-----	10 00	-----	-----	-----	-----	-----	-----	400
7 50	360 00	-----	360 00	360	1200	500	-----	-----	-----	-----	-----	-----	-----	-----	-----	2000
12 00	588 00	\$80	668 00	568	-----	-----	-----	100	8 00	-----	-----	-----	-----	-----	-----	2700
7 80	374 40	-----	374 40	360	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	-----	200
14 00	364 00	-----	364 00	464	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	-----	250

* Gives wages to parents and lives at home.

‡ Lives at home and supports family.

KALAMAZOO.

Six hundred and fifteen employes were canvassed: Kalamazoo Carriage Works, 4; The Lawrence & Chapin Co., 8; Strait & Packard, 8; Godfrey J. Bremer, 8; L. C. & H. L. Pratt & Co. (manufacturers of road carts), 10; Williams Manufacturing Co., 11; L. C. Lull & Co., (manufacturers of agricultural implements, road carts and wagons), 12; Eames Pulley Co., 12; Smith & Pomeroy (manufacturers of wind mills), 12; C. H. Dutton & Co. (manufacturers of wind mills), 13; Kalamazoo Foundry and Machine Co. (general foundry and machine works), 14; L. Cahill & Co. (manufacturers of plow sulkies and cultivators), 13; Newton Carriage Co. (manufacturers of buggies and road wagons), 15; George Clark, 16; Thomas Clarage & Son, 19; Page Manufacturing Co. (lumber), 19; Harrow Spring Co. (manufacturers of springs for agricultural implements), 20; Wm. E. Hill & Co., 21; Peninsular Carriage Co. (manufacturers of carts and road wagons, bodies, shafts etc.), 21; Phelps & Bigelow Wind Mill Co. (manufacturers of wind mills and tanks), 22; D. C. & H. C. Reed & Co. (manufacturers of spring tooth harrows and cultivators), 23; Kalamazoo Railroad Velocipede and Car Co. (manufacturers of railroad velocipedes, hand, push and inspection cars), 33; St. John Plow Co. (manufacturers of riding and walking plows), 35; Fuller Bros. Manufacturing Co. (manufacturers of washboards), 39; Kalamazoo Wagon Co., 45; Kalamazoo Wheel Co. (manufacturers of buggy wheels), 162.

Nationality: Americans, 434; Hollanders, 62; Germans, 49; Canadians, 24; Irishmen, 13; Scotchmen, 13; Englishmen, 12; Swiss, 3; New Zealander, 1; Norwegian, 1; Swede, 1; Italian, 1; Dane, 1. 71-per cent are Americans and 29-per cent foreigners. Of the foreigners 34-per cent are Hollanders; 27-per cent Germans; 13-per cent Canadians; 7-per cent Irishmen; 7-per cent Scotchmen; 7-per cent Englishmen; 1-per cent Swiss, and the other nationalities less than 1 per cent. Parentage of those born in the United States: American, 262; Holland, 41; German, 61; Canadian, 8; Irish, 36; Scotch, 4; English, 17; Swiss, 1; Norwegian, 1; Italian, 1; French, 2. 60-per cent have American and 40-per cent foreign parents. 316 are married, 281 single and 18 widowers. 51-per cent are married, 46-per cent single and 3-per cent widowers. There are employed thirteen boys 15, ten 14, three 13, three 12 and one 11 years of age. 258 support self only; 26 support others than self by boarding, and 331 support families: Americans, 226; Hollanders, 33; Germans, 31; Canadians, 14; Irishmen, 7; Scotchmen, 6; Englishmen, 8; Swiss, 2; New Zealander, 1; Swede, 1; Italian, 1; Dane, 1. In 331 families there are 580 children, of whom 544 are supported. 75 married men have no children: 61 or 81-per cent are Americans; 6 Hollanders; 5 Germans; 2 Canadians; 1 Englishman. Of the children supported 206 are under 5 years of age, 328 are 5 and under 20, and 10 are over 20. 232 attend school, which is 70-per cent of school age. 204 or 88-per cent attend the public schools and 28 parochial. Numbers of persons supported in families 892; by boarding, 35. 51 employes support 65 persons besides wife and children. Total number of weeks worked, 27,321; average, 44.4+. 570 men or 94-per cent lost 4,396 weeks, or 84 years and 30 weeks. Cause of lost time: No work, 84; laid off, 188; sickness, 34; sickness and laid off, 86; holidays, 51; laid off and vacation, 20; holidays and laid off, 13; sickness and holidays, 10; holidays and no work, 2; sickness and no work, 12; vacation, 24; sickness and vacation, 8; worked for self, 5; accident and laid off, 5; shut down, 3; at school, 9; accident, 3; no work and accident, 4; holidays and vacation, 3; accidents, holidays and vacation, 1; shut down and vacation, 1; at other work, 4. Total annual earnings, \$241,619.10; average, \$392.88. Total income from other resources, \$10,074, as follows: Family earnings, \$2,354; boardings, \$1,190; heirships, \$1,950; pensions, \$363; interest, \$366; rent, \$2,307; other sources, 1,544. Total annual earnings of Americans, \$171,970.37; average, \$396.24; Hollanders, \$20,909.75; average, \$337.25; Germans, \$19,306.90; average, \$391.97; Canadian, \$11,962.30; average, \$499.26; Irishmen, \$5,342.90; average \$410.99; Swiss, \$715.08; average, \$238.33; Scotchmen, \$4,270.30; average, \$328.48; English-

men, \$5,267.50; average, \$438.95; New Zealander, \$312; average, \$312; Norwegians, \$490; average, \$490; Swedes, \$432; average, \$432; Italians, \$384; average, \$384; Danes, \$336; average, \$336. Average weekly wages of married men, \$9.79; single men, \$7.55; all employes, \$8.76. Wages paid per week: One employé, \$2.25; two, \$2.40; one, \$2.85; one, \$2.95; fifteen, \$3; two, \$3.25; eighteen, \$3.50; two, \$3.60; ten, \$4; ten, \$4.50; one, \$4.80; thirteen, \$5; one, \$5.25; three, \$5.50; seven, \$5.85; twenty-nine, \$6; one, \$6.25; two, \$6.50; two, \$6.60; one, \$6.75; seven, \$6.76; thirty-two, \$7; one, \$7.20; three, \$7.25; one, \$7.40; seventy-three, \$7.50; one, \$7.60; three, \$7.80; forty-five, \$8; one, \$8.10; two, \$8.25; two, \$8.40; ten, \$8.50; eighty-six, \$9; five, \$9.50; one, \$9.75; one, \$9.80; fifty-eight, \$10; two, \$10.20; forty, \$10.50; one, \$10.80; six, \$11; forty-six, \$12; one, \$12.11; one, \$12.50; seven, \$13; one, \$13.15; nineteen, \$13.50; one, \$13.84; three, \$14; one, \$14.40; one, \$14.50; eighteen, \$15; one, \$15.50; two, \$16; three, \$16.50; one, \$17; four, \$18; one, \$19.23; one, \$20.

Total family expenses, \$135,690; per capita, \$110.94; Americans, \$93,831; per capita, \$121.85; Hollanders, \$12,142; per capita, \$85.50; Germans, \$12,473; per capita, \$96.69; Canadians, \$6,468; per capita, \$102.66; Irishmen, \$2,726; per capita, \$82.60; Scotchmen, \$3,047; per capita, \$89.62; Englishmen, \$2,967; per capita, \$98.90; Swiss, \$645; per capita, \$92.14; New Zealanders, \$312; per capita, \$104; Swedes, \$359; per capita, \$89.75; Italians, \$384; per capita, \$76.80; Danes, \$336; per capita, \$112. Number owning homes, 135: Americans, 85; Hollanders, 19; Germans, 15; Canadians, 4; Irishmen, 5; Scotchmen, 2; Englishmen, 3; Swiss, 1; Swede, 1. 131 married men and 4 widowers own homes. 41+per cent of married men own homes. 63-per cent of home owners are Americans, and 37+per cent foreigners. Total value of homes, \$156,410; average, \$1,158.69; Americans, \$103,600; average, \$1,218.82; Hollanders, \$21,160; average, \$1,113.68; Germans, \$13,100; average, \$873.33; Canadians, \$3,900; average, \$975; Irishmen, \$5,900; average, \$1,180; Scotchmen, \$2,200; average, \$1,100; Englishmen, \$4,700; average, \$1,566.66; Swiss, \$50; average, \$50; Swede, \$1,800; average, \$1,800. The homes of 95 employes are mortgaged, which is 70+per cent. Value of mortgaged homes, \$101,160; mortgaged for \$41,672, which is 41+per cent of valuation. The homes of 60 Americans are mortgaged for \$28,215; 13 Hollanders, \$4,170; 10 Germans, \$4,387; 3 Canadians, \$1,000; 4 Irishmen, \$1,700; 2 Scotchmen, \$1,100; 2 Englishmen, \$600; 1 Swede, \$500. During the year 98 employes made payments and improvements upon homes amounting to \$11,110; 196 men saved \$19,834 in money. Total number of employes who saved, 255, which is 41+per cent. Total savings, including payments and improvements upon homes, \$30,944, which is 13-per cent of total earnings. Total present worth of 502 employes (113 not reporting), \$324,405; average, \$646.22; Americans, 352; total, \$226,385; average, \$643.14; Hollanders, 45, total, \$31,875; average, \$708.33; Germans, 47; total, \$26,980; average, \$574.04; Canadians, 21; total, \$15,670; average, \$746.19; Irishmen, 12; total, \$7,225; average, \$602.08; Scotchmen, 8; total, \$3,520; average, \$440; Englishmen, 10; total, \$9,950; average, \$995; Swiss, 2; total, \$300; average, \$150; New Zealanders, 1; total, \$200; Norwegian, 1; total, \$200; Swede, 1; total, \$1,800; Italian, 1; total, \$200; Dane, 1; total \$100. 4 of the employes are worth \$5,000 each; one \$5,800; one \$6,000. 16 Germans had \$2,932 upon arrival in this country; 6 Hollanders, \$1,765; 5 Canadians, \$705; 3 Irishmen, \$470; 3 Scotchmen, \$110; 2 Englishmen, \$160; 1 Dane, \$500; 1 Swiss, \$25. Total present worth of foreigners, \$98,020. Number renting homes, 176: Americans, 124; Hollanders, 12; Germans, 15; Canadians, 10; Irishmen, 2; Scotchmen, 4; Englishmen, 5; Swiss, 1; New Zealander, 1; Italian, 1; Dane, 1. 8 renters are single men, and 6 have rent free. 53+per cent of married men and 29-per cent of total employes rent. Total monthly rent, \$1,352.16; average monthly rent, \$7.68. Total annual rent, \$16,225.92; average, \$92.19. Per cent of rent to earnings, 21+. Per cent of rent to expenses, 22+. Total monthly rent of Americans, \$979.33; average, \$7.89; Hollanders, \$75.83; average, \$6.32; Germans, \$114.50; average, \$7.63; Canadians, \$81; average, \$8.10; Irishmen, \$17; average, \$8.50; Scotchmen, \$23.50; average, \$7.12; Englishmen, \$35; average, \$7; Swiss, \$5; average, \$5; New Zealander, \$4.50; average, \$4.50; Italians, \$6.50; average, \$6.50; Danes, \$5; average, \$5.

Number of employes boarding, 223, which is 36+per cent of total. 62 employes live at home and give wages to parents; 11 live at home and pay no stated amount for board; 4 live at home and support family. Total weekly board, \$751.50; average, \$3.37. Americans, 164; total, \$546.50; average, \$3.33; Germans, 19; total, \$64.25; average, \$3.38; Canadians, 9; total, \$40.50; average, \$4.50; Irishmen, 5; total \$21.15; average, \$4.23; Hollanders, 18; total, \$46.50; average, \$2.58; Norwegian, 1, total, \$3.60; Englishmen, 4; total, \$15.50; average, \$3.88; Scotchmen, 3; total, \$13.50; average, \$4.50. 50 employes keep an itemized account of their expenses, which is 8+per cent, 221 own sewing machines, which is 67-per cent of those supporting families. 129 own musical instruments, which is 21-per cent. Number of musical instruments: Pianos, 11; organs, 49; guitars, 22; violins, 20; accordians, 9; melodeons, 8; horns, 3; flutes, 3; drums, 2; banjos, 2; cornets, 2; dulcimer, 1; piccolo, 1; concertina, 1; fife, 1. Number of employes who take news-

papers and magazines, 353: Americans, 253; Hollanders, 26; Germans, 26; Canadians, 16; Irishmen, 9; Englishmen, 11; Scotchmen 8; Norwegian, Swede, Swiss and Italian, 1 each. 57+per cent take newspapers and magazines, of which 72-per cent are Americans. Number of dailies taken, 315; story, 24; sporting, 4; religious, 18; labor, 2; scientific, 17; local and other weekly papers, 137; magazines, 25; miscellaneous, 12.

Three hundred and seventy-six work at hand and 198 at machine work and 41 at both. 55 men or 9-per cent have been injured since engaged as employes. 1 reported that his labor organization had been of financial benefit to him, and 32 no financial benefit. Other than financially, 10 reported that their labor organizations had been of benefit socially and educationally; 2 educationally; 2 socially and 21 no benefit. 92 carry life insurance amounting to \$106,360; average, \$1,156.08; Americans, 57; total, \$75,110; Hollanders, 3; total, \$5,000; Germans, 16; total, \$10,150; Canadians, 6; total, \$5,050; Irishmen, 2; total, \$3,000; Scotchmen, 1; total, \$1,000; Englishmen, 4; total, \$4,050; Swiss, 2; total, \$1,000; Norwegians, 1; total, \$2,000. 15-per cent are insured. 69 belong to benefit societies; Americans, 42; total weekly benefit, \$266; average, \$6.33; Germans, 16; total, \$85; average, \$5.31; Hollanders, 4; total, \$25; average, \$6.25; Canadians, 2; total, \$8; average, \$4; Irishmen, 1; total, \$5; Englishmen, 2; total, \$10; average, \$5; Swiss, 2; total, 10; average, \$5. Total weekly benefit, \$409; average, \$5.93. 11+per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
LANSING.

TABLE No. 5.—*Showing the Individual Reports*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
E. BEMENT & SONS.												
Book-keeper	29	Canada	England	wr	1	1	1	1	2	32	20	sick and no work
Machinist	40	U. S.	U. S.	m	3	3	2		4	48	4	sick
Foreman	37	"	Germany	m	5	5	2		3	50	2	holidays and laid off
	37	Germany	"	m	5	5	3		6	48	4	sick
Laborer	44	"	"	m	6	6	3		7	43	9	laid off and holidays
"	51	"	"	m	1	1	1		2	24		first work in U. S.
Iron worker	26	"	"	s						50	2	sick and holidays
	16	U. S.	"	s						48	4	laid off
Laborer	17	Germany	"	s						48	4	sick
Iron worker	38	U. S.	France	m	2	2	2		3	26	26	laid off
"	18	Germany	Germany	s						48	4	holidays & accident
"	46	"	"	m	1	1	2		2	50	2	laid off
"	36	"	"	m	1	1	1		2	48	4	"
	19	"	"	s						50	2	
Laborer	26	"	"	s						14		first work in U. S.
Engineer	36	U. S.	U. S.	wr	3	3	2		3	52		
Laborer	15	Germany	Germany	s	1	1			2	37	15	no work
"	28	"	"	m	1	1			2	50	2	holidays and laid off
"	34	"	"	m	6	6	3	1	8	49	3	laid off
"	27	"	"	m	1	1			2	50	2	holidays and laid off
"	28	U. S.	U. S.	m					1	45	7	accident
"	45	"	"	m	3	3	2		4	50	2	holidays and laid off
"	36	Germany	Germany	m	2	2	2		3	52		
Machinist	16	U. S.	England	s						48	4	laid off
Laborer	32	Germany	Germany	m	5	5	2		6	48	4	"
"	27	U. S.	U. S.	m					1	30	22	no work
Stove moulder	30	Germany	Germany	m	1	1			2	51	1	holidays
Machinist	30	U. S.	U. S.	m				4	5	52		
"	38	"	Germany	m	2	2			3	50	2	sick and holidays
Laborer	33	Germany	"	m	4	4	1		5	46	6	laid off
Machinist	33	U. S.	U. S.	s						49	3	sick and laid off
Elevator hand	16	"	"	s						9		first work
Machinist	20	"	England	s						43	9	no work
"	26	"	Ireland	s	1	1			2	46	6	sick, holidays & laid off
Laborer	19	Germany	Germany	s						51	1	holidays
"	33	"	"	m	2	2			3	49	3	sick and laid off
"	22	"	"	s						12		first work in U. S.
"	39	"	"	m	5	5	2		6	49	3	laid off
"	44	"	"	m	4	4	2		5	46	6	"
"	26	"	"	m	1	1			2	50	2	"
"	23	Ireland	Ireland	m					1	48	4	sick and laid off
"	45	Germany	Germany	m	5	5	2		6	3	49	sick
Foreman	28	"	"	s				1	1	40	12	sick and laid off
Laborer	49	"	"	m	7	6	2		7	48	9	laid off
Receiving clerk	33	U. S.	U. S.	m					1	47	5	sick
Carpenter	30	"	"	s						48	9	sick and laid off
Laborer	25	Germany	Germany	m				1	2	44	8	"
"	24	"	"	s						35	17	"

of the Employes Canvassed in Lansing.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$288 00		\$288 00	\$228				\$80						22		\$80
13 00	624 00	\$123	747 00	677	\$700	\$500	\$30	40								300
11 50	575 00		575 00	428	1200	875	152				\$1000	2	\$10 00	7	\$400	1500
10 00	480 00		480 00	480	800		50					2	10 00	1000		1000
6 76	290 68		290 68	290	700	150					500	2	10 00	6	800	800
6 00	144 00	864	508 00	508					\$7 00							
7 50	375 00		375 00					150		\$3 50		2	6 00	1 1/2		60
8 50	168 00		168 00					*		3 50						50
5 80	278 40		278 40											16		
9 00	284 00		284 00	154	1000	400	80									700
4 00	192 00		192 00					105		2 00				3		180
7 50	875 00	240	615 00	515	700	250	100					2	6 00	16	42	700
7 50	360 00		360 00	360	900	850					500	2	10 00	6		650
6 00	300 00		300 00							3 50		2	6 00	1		30
7 50	105 00		105 00							8 00		2	6 00	4 mo		
12 00	624 00		624 00	624				*		*		2	6 00	7		
3 00	111 00		111 00						6 00					2	20	40
7 50	375 00		375 00	375										9	25	1400
10 00	490 00		490 00	415	1100	75			5 00					2		800
8 00	400 00		400 00	400												
8 00	860 00		860 00	860					6 00		1500	1	10 00			250
7 50	875 00	80	455 00	870	1000	540	85				2000	2	6 00			700
8 00	416 00	100	516 00	866	900	306	150					2	6 00	8	47	900
9 00	432 00		432 00							3 00						500
7 50	860 00		860 00	285	600		125							11	750	850
6 00	180 00	150	330 00	330					8 00							70
9 00	450 00		450 00	239	1000		220							16		1600
6 00	312 00	812	624 00	624					10 00							400
8 00	400 00		400 00	280	1400	800	20	100								1000
7 50	845 00		845 00	820	500	225	25							6	135	625
10 00	490 00		490 00					200		3 50	100	2	6 00			500
3 00	27 00		27 00					15		free						
14 00	602 00		602 00							5 00						200
7 50	845 00		845 00							*						500
6 60	836 60		836 60	805	500	100	40							14		
6 76	331 24		331 24	221	900	800	100							4	15	150
6 00	72 00		72 00							2 50				4 mo	7	
6 00	294 00		294 00	294	500	300								15	125	400
7 50	845 00		845 00	345	500	200								3		450
7 50	375 00	144	519 00	447	800	600	72				600	2	10 00	3		500
7 50	360 00		360 00	315	800	675	45							5	5	400
6 00	18 00		18 00		850	800								18	200	90
7 50	300 00		300 00					50		3 50		1	6 00	4		100
6 76	290 68		290 68	218	1000	600	72			8 50	3000	2	10 00	22		650
9 00	428 00	350	773 00	773					10 00		300	1	15 00			400
10 50	451 50		451 50							3 50						100
6 76	297 44		297 44	272	650		25							7	100	800
6 76	236 60		236 60							8 50		1	6 00	6		

* Gives wages to parents and lives at home.

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Stove mounter	19	U. S.	U. S.	s					43	9	sick
"	23	Ireland	Ireland	s					30	22	laid off
Elevator hand	15	Canada	"	s					26		first work
Stove mounter	20	U. S.	Canada	s					26	26	no work and sick
Laborer	16	Germany	Germany	s					48	4	accident and laid off
Stove mounter	21	"	Germany	s			2	2	35	17	laid off and sick
"	17	Ireland	Ireland	s					49	3	"
Foreman	23	"	England	s					45	4	accident
Laborer	22	Germany	Germany	s					52		
Stove mounter	21	"	"	s					49	3	laid off and sick
Laborer	16	U. S.	England	s					26	26	laid off
Polisher	18	Germany	Germany	s					50	2	no work
Machine hand	19	U. S.	U. S.	s					50	2	holidays and laid off
Iron worker	22	"	Germany	s					48	4	no work
Blacksmith	38	"	U. S.	s					50	2	holidays and laid off
Laborer	26	Germany	Germany	s					43	9	laid off
Iron worker	28	"	"	s					85	17	no work
"	26	U. S.	U. S.	s					50	2	holidays and laid off
"	22	"	"	s					43	9	laid off and accident
Molder	23	Germany	Germany	s					40	12	laid off
"	18	Canada	Canada	s					39	13	"
Assistant supt.	29	Sweden	Sweden	s					52		
Pattern filer	21	U. S.	U. S.	s					46	6	sick and laid off
Time-keeper	26	Denmark	Denmark	s			1	4	50	2	holidays and laid off
Book-keeper	24	U. S.	U. S.	s					46	6	no work
Billing clerk	31	Denmark	Denmark	s					51	1	vacation
Book-keeper	22	U. S.	Ireland	s					52		
Receiving clerk	22	"	U. S.	s			4	4	52		
Laborer	15	"	Germany	s					26	26	no work
"	22	Germany	"	s					26	26	laid off
Teamster	25	"	"	s					50	2	laid off and holidays
Laborer	13	U. S.	"	s					43	4	accident
Molder	20	"	U. S.	s					39	13	laid off
Painter	20	"	"	s					33	30	no work
"	20	"	"	s					23	30	other business
"	22	Canada	"	s					45	7	sick
"	22	U. S.	Canada	s					46	6	laid off
"	20	"	Ireland	s					39	13	"
"	19	Germany	Germany	s					48	4	sick and laid off
"	16	U. S.	U. S.	s					46	6	laid off
"	16	Germany	Germany	s					50	2	"
Laborer	19	U. S.	U. S.	s					44	8	"
Painter	21	Germany	Germany	s					49	3	"
Wood worker	56	U. S.	U. S.	s					51	1	holidays
Laborer	15	England	England	s					22	4	first wk in U. S. & laid off
Molder	23	U. S.	U. S.	s			1	1	48	4	laid off
"	23	Germany	Germany	s					42	10	"
"	19	"	"	s					44	8	"
"	18	U. S.	Canada	s					44	8	sick and laid off
"	20	Germany	Germany	s					42	10	laid off
"	21	"	"	s					46	6	"
Machinist	21	U. S.	U. S.	s					39	13	sick
Laborer	36	Germany	Germany	m	3	2		3	48	9	laid off

TABLE No. 5.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt. 't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$11 00	\$473 00		\$473 00					\$30		\$3 50		1	\$3 00			\$30
12 00	860 00		860 00					*		4 50				21		50
3 00	78 00		78 00					*		4 00				13		12
7 00	182 00		182 00					*						8		
6 00	238 00		238 00													
3 00	245 00		245 00					100		3 50				9		200
7 50	357 50		357 50					100		3 50				15		800
14 50	696 00		696 00					300		3 00		1	6 00	14		300
3 50	182 00		182 00					*100		2 00	\$500	1	4 00	13		150
10 00	490 00		490 00							*				26		
6 00	156 00		156 00					*		3 00						
7 00	350 00		350 00							116	1	1	6 00	18		
7 50	375 00		375 00					30		3 00						200
9 00	432 00		432 00					75		2 50		1	6 00			400
10 00	500 00		500 00					100		4 00						600
6 00	258 00		258 00					50		3 50	500	2	10 00	2		150
6 00	210 00		210 00							4 00		1	4 00	6		80
12 00	800 00		800 00							4 00	500	2	10 00			200
8 00	344 00		344 00							4 00		1	6 00			25
10 00	400 00		400 00					80		3 00				7		20
4 50	175 50		175 50							†		1	6 00	12		
19 28	1000 00		1000 00					400		5 00				6	\$300	800
7 50	345 00		345 00							3 80						15
8 25	412 50		412 50							4 00		1	6 00	2	70	200
12 00	552 00		552 00					200		3 50						500
9 00	459 00		459 00							4 25				6	40	200
9 00	468 00		468 00							4 25						
11 25	536 00	\$25	610 00	\$610				*		*	2500	1	12 50			
3 00	78 00		78 00					*		*						
7 50	196 00		196 00							3 00				2	25	
7 50	375 00		375 00					75		3 00	500	2	10 00	4	50	300
3 00	144 00		144 00					*		3 50						50
12 00	468 00		468 00							3 00						100
6 00	182 00	156	238 00							3 50						50
6 00	132 00		132 00													
8 00	360 00	80	440 00		\$750			96		3 50				17		850
8 00	368 00		368 00							3 00						100
6 00	224 00		224 00							3 00						50
7 00	336 00		336 00							3 50				4		100
6 00	276 00		276 00							3 50						100
7 00	350 00		350 00					50		3 50				6		
7 00	308 00		308 00					120		3 00						140
7 00	343 00		343 00					20		3 50				5		225
10 00	510 00		510 00					200		4 00						3000
4 85	106 70		106 70							3 00				4		600
10 00	480 00		480 00	380				100	\$10 00	3 50	500	1	4 00	3	20	200
8 00	336 00		336 00					75		3 00		1	6 00	5		250
10 00	440 00		440 00					50		3 50		1	6 00			
9 00	396 00		396 00					50		3 50				6		200
8 00	336 00		336 00					75								
12 00	552 00		552 00					50		3 50		2	11 00	5		100
7 50	292 50		292 50					80		3 00						150
6 76	290 68		290 68	260	1200	\$1600	\$30							3	30	850

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE NO. 5.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	38	Germany	Germany	m	5	5	2		6	39	13	laid off
"	59	"	"	m	1	1			1	42	10	"
"	37	"	"	m	4	2	2		3	26	26	"
"	43	"	"	m	2	2	2		3	43	9	"
"	38	"	"	m	6	6	4		3	43	9	"
"	45	Ireland	Ireland	m	6	6	4		7	39	13	"
"	56	Germany	Germany	m	2	2			3	22	30	1st wk in U.S. & laid off
Wood bender	27	U. S.	U. S.	m	1	1			1	48	4	laid off and holidays
Stove mounter	33	Ireland	Ireland	m	4	4	2		5	43	9	laid off
Wood bender	63	U. S.	U. S.	wr						48	4	"
Stove mounter	40	Canada	Canada	wr	4	3	1		3	35	17	sick and no work
"	28	U. S.	Germany	m	3	3			3	23	23	3 farm w'k 6 m. holidays
Machinist	30	Germany	"	m	1	1		1	3	50	2	holidays and laid off
"	60	U. S.	U. S.	m	5	1			2	48	4	sick and laid off
Nickle plater	27	Germany	Germany	m	2	2			3	50	2	laid off
Stove mounter	28	U. S.	England	m	1				1	46	6	sick and laid off
"	45	Ireland	"	m	3	3			2	30	23	laid off
Wood worker	34	U. S.	U. S.	m	3	3	1		4	50	2	sick and laid off
Molder	34	Germany	Germany	m	3	3			4	46	6	laid off
Pattern filer	24	U. S.	U. S.	m	1	1			2	50	2	holidays and laid off
Laborer	43	Germany	Germany	wr	4	4	2		4	48	4	laid off and sick
"	29	"	"	m	2	2			3	49	3	laid off
"	40	England	England	m	8	8	3		9	26	2	first work in U. S.
Stove mounter	31	Germany	Germany	m	4	4	1	1	6	43	9	sickness and laid off
Blacksmith	45	U. S.	U. S.	m	7	5	5		6	50	2	no work
Ast. superintendent	32	"	"	m	2	2			3	52		
Pattern maker	39	"	"	m	2	2	1		3	50	2	vacation
Foreman	29	"	Ireland	m	3	3	1		4	46	6	sick and holidays
Pattern maker	28	"	U. S.	m	3	3	1		4	50	2	holidays and sick
Wood worker	24	"	"	m					1	49	3	laid off
"	39	"	"	m	1	1			2	39	13	"
Molder	28	"	"	m				1	2	40	12	"
"	25	Germany	Germany	m	2	2			3	37	15	sick and laid off
Laborer	32	Canada	U. S.	m					1	34	18	laid off
Iron worker	28	Germany	Germany	m	2	2			3	35	17	sick and laid off
Laborer	33	"	"	m	3	3			4	31	21	accident and laid off
"	39	U. S.	U. S.	m	3	3	3		4	48	4	laid off
Wood worker	33	"	Germany	m	1	1	1		2	26	26	in other business
"	29	"	Germany	m					1	39	13	laid off
"	52	"	U. S.	m	8	8	3		4	50	2	holidays and laid off
"	50	Canada	"	m	4	2	2		3	41	11	sickness, other business
Molder	24	Germany	Germany	m				3	4	46	6	laid off
"	23	U. S.	U. S.	m					1	48	4	other business
"	29	Germany	Germany	m	2	2			3	37	15	laid off
"	28	U. S.	U. S.	m	1	1			2	45	7	"
"	24	Germany	Germany	m	1	1			2	37	15	sick and laid off
"	27	"	"	m	2	2	1		3	40	12	laid off
"	32	U. S.	"	m	2	1			2	23	26	sick, injured & laid off
"	25	"	"	m					1	36	16	laid off
"	33	"	U. S.	m					1	37	15	"
"	25	Germany	Germany	m	6	6	3		7	26	26	"
"	40	Poland	Poland	m	5	5	3		6	26	26	sick and laid off
"	36	Germany	Germany	m	1	1			2	40	12	laid off

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other source.	Total annual income.		If owning home, its value.	If in debt on home, amt't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 00	\$278 00		\$278 00	\$278					\$6 00							\$200
6 00	252 00		252 00	252					free						\$2	100
6 00	208 00		208 00	188	\$450	\$400	\$25								80	80
6 76	230 68		230 68	223	600										650	650
7 50	322 50		322 50	197	500	300	50								400	400
9 00	351 00		351 00	311	500		40								808	808
6 76	148 72	\$40	188 72	248	900	800	20							8 mo	80	150
7 50	360 00		360 00	360					5 00						200	200
15 00	645 00		645 00	645					10 00						600	600
9 00	432 00	20	452 00					\$200		\$4 00	\$2000	16 00			5000	5000
12 00	420 00		420 00	420					12 00		2000	1	5 00	20	600	600
10 50	241 50		241 50	166	1200	1100	75				1500	1	16 00	6	400	400
10 00	500 00		500 00	400	900	500	100				800	2	8 00	6	700	700
10 00	480 00	72	552 00	480	700	300	72								700	700
18 00	900 00		900 00	650	1000	400	250				500	10 00		7	150	1500
12 00	552 00		552 00	552					8 00						500	500
12 00	480 00		480 00		350					4 50	2000	1	5 00	5	400	400
10 50	525 00		525 00	400	500	500	125				3000				1000	1000
8 00	368 00		368 00	259	500	200	108							4	30	375
9 00	450 00		450 00	450					5 00						300	300
7 00	336 00		336 00	306	600	450	80								200	200
7 00	343 00		343 00	268	300	225	75								150	150
7 50	195 00	117	312 00	312	500	475			6 00					7 2 1/2	50	200
7 50	322 50		322 50	322	500									1 1/2	200	200
10 00	500 00	144	644 00	419	2500	400	150	75			1500	1	10 00		2800	2800
15 00	780 00		780 00	700	2500	200	80				3500				3000	3000
24 00	1200 00		1200 00	1300					14 00						1000	1000
12 00	552 00		552 00	432	600	375	120				3000	1	6 00		800	800
18 50	675 00	50	725 00	500	175	175	50								1500	1500
7 50	367 50		367 50	367					4 00						400	400
9 50	370 50		370 50	307	700										1000	1000
13 50	540 00		540 00	400	700	675	140				1000				650	650
9 00	333 00		333 00	323	800	150					500	1	4 00	13	1000	1000
7 50	255 00		255 00	167	525	350	88							29	225	225
9 00	315 00		315 00	315	800	600						1	4 00	5	50	600
7 50	282 50		282 50	232					5 00					6	20	50
7 37	353 76	100	453 76	258	1000			185	9 00						2000	2000
10 00	280 00		280 00	208	850	65		52							1000	1000
6 00	234 00		234 00	284	600	550									350	350
9 00	450 00	60	510 00	510					7 00			1	6 00		200	200
14 00	574 00		574 00	532					8 00		1000	1	6 00	7	200	1500
13 00	598 00	20	618 00	554	900	300	24	40			400	1	4 00	8	900	900
10 00	480 00		480 00	380				100	6 50						150	150
17 00	629 00		629 00	395	1400	125	284							22	1900	1900
16 00	720 00		720 00	470	2200	350	200	50			1000				3000	3000
9 00	833 00		833 00	333					6 00		2000	1	6 00	8	500	500
11 00	440 00		440 00	300	1100	500	140				2800	1	4 00	7	1000	1000
7 00	182 00	40	222 00	148	800	500	74				500	2	6 00	8	250	500
8 00	288 00		288 00	218	800		70								1200	1200
16 00	592 00		592 00	409	1800		83	150			2500				3000	3000
8 00	208 00		208 00	208	700	350								10	80	500
12 00	312 00		312 00	312					7 00					17	200	300
9 00	360 00		360 00	300				60	8 00					5	550	550

TABLE NO. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	30	Germany	Germany	m	4	4	2		5	37	15	laid off
	34	"	"	m	3	3			4	42	10	"
Laborer	34	"	"	m	4	4	2		5	43	4	"
Iron worker	28	"	"	m	3	3	2	1	5	39	13	sick and laid off
	28	U. S.	U. S.	m	1	1			2	50	2	holidays and laid off
	27	Germany	Germany	m	1	1		1	3	48	4	sick
Laborer	35	"	"	m	5	5	2		6	40	12	sick and laid off
Blacksmith	38	U. S.	U. S.	m	3	3	2		4	35	17	no work
	78	"	"	m	1	1			2	50	2	holidays and laid off
Laborer	30	Germany	Germany	m	2	2	1		3	52		
Blacksmith	27	U. S.	"	m	1	1			2	50	2	holidays and laid off
	45	Canada	Canada	m	4	4			5	35	17	laid off
Machinist	40	England	England	m	1	1			2	49	3	"
Laborer	42	Ireland	Ireland	m	3	3	1		4	37	15	"
	48	Germany	Germany	m	5	5	2		6	43	9	"
Molder	25	Ireland	Ireland	s						40	12	"
	17	Germany	Germany	s						43	9	laid off and injured
Laborer	24	"	"	s						26	26	no work
Molder	38	"	"	m	8	8	4		9	40	12	laid off
	27	Canada	Canada	m	1	1	1		2	39	13	laid off and sick
Machinist	37	U. S.	U. S.	m	4	4	3		5	52		
	54	"	"	m	1	1			1	45	9	sick
	25	Germany	Germany	m	1	1			2	52		
	28	U. S.	U. S.	m					1	48	4	sick
Laborer	27	"	"	m					1	48	4	sick and laid off
Wood worker	26	"	"	m			2		3	45	7	sick and holidays
	30	"	"	m	1	1	1		2	46	6	sick
Laborer	45	"	"	m	4	3	1	2	6	39	13	no work
	29	"	"	m	2	2	2		3	50	2	sick and no work
Wood worker	29	"	Germany	m	3	3	1		4	51	1	sick
	37	Canada	Ireland	m	8	5	4		6	46	6	sick and shut down
Laborer	23	Germany	Germany	m	1	1		1	3	43	9	laid off
Molder	47	Ireland	Ireland	m	1	1	1		2	44	8	"
	34	Germany	Germany	m	1	1			2	44	8	"
Painter	31	U. S.	U. S.	m	1	1	1	1	3	50	2	sick
	55	Germany	Germany	m	4				1	44	5	sick & at other work
Foreman	50	Ireland	Ireland	m	3	1	1		2	52		
Asst. foreman	31	Germany	Germany	m	3	3			4	50	2	sick and laid off
Molder	45	U. S.	U. S.	m	4	4	3		5	46	6	laid off
	22	"	"	m	1	1			2	48	4	laid off and accident
	48	"	"	m	2	2	2		3	43	9	laid off
	24	Germany	Germany	m	1	1			2	46	6	"
	26	U. S.	U. S.	m	1	1			2	44	8	"
	26	Germany	Germany	m	2	2		1	4	45	7	"
Laborer	26	U. S.	England	m	4	4	2		5	52		
Wood worker	52	"	U. S.	m	2	1			2	50	2	sick and laid off
	44	"	"	m					1	50	2	sick and no work
	44	"	"	m	3	2	1		3	49	3	holidays and sick
	37	"	"	m	2	2	2		3	50	2	sick
	32	"	"	wt				2	2	50	2	"
	28	"	"	wt	1	1	1		1	49	3	shut down
Foreman	33	"	"	m	1	1			2	52		
	35	"	"	m	1	1			2	30	22	laid off

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payment on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$10 00	\$370 00	\$140	\$510 00	\$185	\$1800	\$600	\$175		\$8 00		\$500	1	\$4 00	22	\$1400
9 00	378 00		378 00	378					5 00					300	300
7 50	360 00		360 00	360					8 00					1000	1000
8 00	312 00		312 00	312							1500	2	10 00	5	350
8 25	412 50		412 50	262	650	150	100	\$50			1000	1	6 00	7	1000
9 00	482 00		432 00	432					4 00		500	2	10 00	3	500
6 78	270 40		270 40	242	800	400	28							2	700
11 00	385 00		385 00	257	1200	400	128							1500	1500
9 00	450 00		450 00	450					10 00					500	500
6 50	388 00		388 00	338					6 00		300	2	10 00	2	200
9 00	450 00	120	570 00	370	1200	500	200					1	4 00		1500
9 00	315 00	60	375 00	375					8 00					25	800
13 50	661 50		661 50	661					8 00					500	500
9 00	323 00		323 00	273	900		60					1	6 00	6	1000
6 78	290 68		290 68	290					6 00			1	6 00	4	55
12 00	480 00	35	515 00		700	250	160	50		\$4 50	1000	1	5 00	3	500
8 00	344 00		344 00					100		3 50				2	150
7 50	195 00		195 00					39		3 00				1	145
9 00	360 00		360 00	310	500	300	50				500	1	4 00	8	580
13 00	507 00	48	555 00	507				48	8 00					28	1400
10 50	546 00		546 00	426				120	7 00						400
9 00	357 00		357 00	357					8 00		1000	2	6 00		600
8 00	416 00		416 00	296	1200	600	150				1000			17	800
9 00	482 00		432 00	332				100	8 50						1000
6 00	288 00		288 00	238					10 00						800
7 50	387 50		337 50	227	900	500	100								550
9 00	414 00		414 00	364				50	5 00						800
7 50	292 50		292 50	292					8 00						150
7 37	368 50		368 50	289	800	300	75					1	4 00		700
13 00	663 00	175	838 00	450	1800	600	300	88			1000	1	6 00		2200
7 37	339 02	887	726 02	551	1500	261	175					1	6 00	22	1600
7 50	322 50		322 50	272				50	4 00					6	110
12 00	528 00	5	533 00	358	500	150	125	50			180			40	1000
10 00	440 00	300	740 00	640	600		100					1	4 00	5	750
7 50	375 00	280	655 00	655					6 00						1500
7 00	306 00	96	404 00	356	700	350									900
19 23	1000 00	150	1150 00	1150					20 00		3000	2	10 00	40	1200
9 00	450 00		450 00	450					6 00			1	6 00	16	400
10 50	488 00		488 00	408	500	400	75								700
10 00	480 00		480 00	390	150	90	100								350
9 00	387 00	96	483 00	483					8 00		2000	1	6 00		900
9 00	414 00		414 00	309			106							8	350
8 00	352 00		352 00	244	850	600	68	40							700
10 50	472 50		472 50	252	800		200					1	6 00	11	1000
7 00	364 00		364 00	349				15	5 00						45
7 50	375 00		375 00	425					5 50						200
11 00	550 00	4	554 00	454	800	300	100					1	6 00		800
13 00	637 00		637 00	437	1500							1	6 00		2000
12 00	600 00	64	664 00	450				150	8 00			1	6 00		1000
8 00	400 00		400 00	425					11 00			1	6 00		
7 50	367 50		367 50	217				150				1	6 00		600
14 00	728 00	210	938 00	800				78	5 00		3000	2	18 50		2200
15 00	450 00		450 00	500					13 00		3000				1200

TABLE No. 5.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Painter.....	29	U. S.	U. S.	m	—	—	—	1	2	47	5	sick and laid off
Laborer.....	30	Germany	Germany	m	3	3	—	—	6	50	2	laid off
Painter.....	39	"	"	m	5	5	1	—	6	50	2	holidays, other business
Wood worker.....	59	U. S.	U. S.	m	1	1	—	—	2	50	2	sick and holidays
Blacksmith.....	44	"	"	wt	5	2	2	—	2	48	4	laid off
Wood worker.....	23	Canada	Canada	m	—	—	—	—	1	51	1	sick
Painter.....	20	U. S.	U. S.	m	1	1	—	—	2	51	1	"
LANSING IRON & ENGINE WORKS.												
Machinist.....	19	U. S.	U. S.	s	—	—	—	—	—	29	—	in other business
".....	22	"	"	s	—	—	—	—	—	47	5	vacation
".....	30	"	"	s	—	—	—	—	—	48	4	sick and no work
".....	30	"	"	m	2	2	1	—	4	52	—	"
".....	27	"	"	m	1	1	—	1	3	51	1	holidays
".....	27	Canada	Scotland	s	—	—	—	—	—	39	13	sick and no work
".....	51	U. S.	U. S.	m	1	1	—	—	2	52	—	"
".....	20	"	"	s	—	—	—	—	—	49	3	vacation
".....	27	"	Ireland	m	1	1	—	—	2	50	2	"
Laborer.....	57	Germany	Germany	m	1	1	1	1	3	50	2	holidays and sick
Machinist.....	31	U. S.	U. S.	s	—	—	—	2	2	50	2	holidays & vacation
".....	29	"	"	s	—	—	—	—	—	48	4	vacation and sick
".....	30	"	"	m	1	1	—	—	2	50	2	holidays and sick
".....	29	"	Ireland	m	—	—	—	—	1	46	6	"
".....	25	"	U. S.	m	2	2	—	—	3	49	3	sick's, death in family
".....	24	"	"	m	1	1	—	—	2	51	1	vacation
Machine hand.....	21	"	Canada	s	—	—	—	—	—	39	13	"
Machinist.....	28	"	England	m	4	4	—	—	5	50	2	holidays & vacation
Machine hand.....	38	"	U. S.	m	2	2	1	—	3	49	3	sick
Machinist.....	49	"	U. S.	m	5	4	3	—	5	50	2	sick and holidays
".....	43	Canada	Canada	m	—	—	—	2	3	42	10	sickness in family
Molder.....	28	U. S.	U. S.	m	—	—	—	—	1	43	9	laid off
".....	38	Germany	Germany	m	1	1	—	—	2	44	8	accident and sick
".....	57	U. S.	U. S.	m	2	2	2	1	4	22	30	no work
".....	36	Switz.	Switz.	m	4	4	1	—	5	43	9	sick
".....	38	Canada	England	m	4	3	2	—	4	50	2	vacation
".....	31	U. S.	U. S.	m	—	—	—	—	1	48	4	laid off
Core maker.....	31	"	"	wt	—	—	—	1	1	49	3	sick and vacation
Laborer.....	38	Germany	Germany	m	—	—	—	—	1	51	1	sick
Engineer.....	34	"	"	m	1	1	—	—	2	52	—	"
Painter.....	18	U. S.	U. S.	s	—	—	—	—	—	43	9	accident & no work
Machinist.....	21	Germany	Germany	s	—	—	—	—	—	45	7	sick and no work
".....	32	"	"	m	1	1	—	2	4	47	5	sick and laid off
Laborer.....	28	U. S.	U. S.	m	4	4	4	—	5	43	9	accident and laid off
Foreman of paint shop.....	37	"	"	m	2	2	2	—	8	43	9	no work
Machinist.....	18	"	"	s	—	—	—	—	—	32	20	at school
".....	25	"	"	s	—	—	—	1	1	39	13	laid off
Boiler maker.....	19	Canada	Canada	s	—	—	—	1	1	39	13	sick
Machinist.....	22	U. S.	England	m	2	2	—	—	3	39	13	sickness and laid off
Draftsman.....	20	"	U. S.	s	—	—	—	—	—	5	—	first work
Shipping clerk.....	24	"	"	s	—	—	—	—	—	50	2	out on other business
Blacksmith.....	26	"	"	s	—	—	—	—	—	50	2	holidays & vacation
Boiler maker.....	25	England	England	s	—	—	—	—	—	52	—	"
".....	28	U. S.	U. S.	s	—	—	—	1	1	51	1	holidays

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
17 50	\$352 50	\$104	\$456 50	\$356				\$200	\$8 00							\$800
7 50	375 00		875 00	875	\$575	\$300										600
10 50	525 00	100	625 00	433	2000	700	\$92				\$2500	3	\$10 00	5		8000
10 00	500 00	50	550 00	550					12 00		1000	1	6 00	25		600
10 00	480 00		480 00	480												200
9 00	459 00		459 00	800	1000	400	150									1000
9 00	459 00	200	659 00	329			150	180	8 00		2000	2	11 00	6	35	800
5 40	156 60		156 60							\$3 50						100
8 50	399 50		399 50					75		3 50						75
6 00	268 00		268 00					25		3 50						50
15 00	780 00		780 00	480	1500	600	150	150			3000					1800
14 50	738 50		738 50	588			150	150	7 00							500
15 00	585 00		585 00					175		4 00		1	3 00	5	80	500
12 00	624 00		624 00	624					10 00		3000					
8 00	392 00		392 00					150		1 50	1000					300
13 00	650 00		650 00	550				100	10 00		3000					600
6 00	300 00	75	375 00	375	1000	500								28	30	700
18 50	675 00		675 00							4 50						500
13 50	648 00		648 00					800		4 00						500
12 00	600 00	75	675 00						10 00							1500
14 50	667 00		667 00	417			250	6 50			100	1	4 00			500
13 00	637 00		637 00	337	1600	900	300									1800
14 00	714 00	300	1014 00	714				300	8 50		1000					1900
9 00	351 00		351 00					25		\$ 50						100
9 40	470 00		470 00	295	1000			175			1000	1	5 00			1800
9 00	441 00		441 00	441					8 00		1000					400
12 00	600 00		600 00	550	1000	450	50				500	1	4 00			1000
12 00	504 00		504 00	354	1200	500	150					1	1 50	16	800	1000
12 00	516 00		516 00	313	1000	800	30	170								425
14 00	616 00		616 00	416	1300	600	150	50			500	1	4 00	28		900
12 00	264 00		264 00	264					4 00		500					2000
15 00	645 00		645 00	495	700	500	150				500	1	4 00	10		500
12 00	600 00		600 00	500	1400		25	75			2000			25		2000
14 00	672 00	50	722 00	522				200	10 40							1200
10 50	514 50		514 50	464	1000			50								1400
10 50	535 50		535 50	425	600	250	110				500	1	4 00	8	15	700
13 50	702 00		702 00	702	900	260					3000			18	120	1000
6 00	258 00		258 00					45		3 00						
9 00	405 00		405 00							4 00				1	25	150
12 00	564 00		564 00	564					9 00		1000			9	100	300
9 00	387 00		387 00	382	400	400	25									200
10 50	451 50		451 50	301				150	11 00							800
7 50	240 00		240 00							3 00						
9 00	351 00		351 00	308	1000	350	17	26								1000
9 00	351 00		351 00							4 00				9		900
9 00	351 00		351 00	351	700	300										600
9 00	45 00	400	445 00							4 00						
10 00	500 00		500 00					125		3 75						125
10 00	500 00		500 00					140		4 00						800
15 00	780 00		780 00							4 50						
12 00	612 00		612 00	420	1200	700	192				1250	1	10 00	11		1000

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Boiler maker	29	U. S.	U. S.	m	—	—	—	1	2	39	13	sick
"	24	"	"	m	—	—	—	—	—	45	9	vacation & holidays
"	30	"	Ireland	m	1	1	—	—	2	49	3	laid off and vacation
"	30	"	Germany	m	—	—	—	—	—	49	2	laid off
"	33	Canada	England	m	2	2	—	1	5	30	23	no work
"	23	England	Ireland	s	—	—	—	—	—	30	22	no work
Tinsmith	26	Germany	Germany	s	—	—	—	—	—	53	—	—
Boiler maker	18	U. S.	U. S.	s	—	—	—	—	—	40	12	sick
Carpenter	23	U. S.	U. S.	s	—	—	—	—	—	50	2	holidays & vacation
Blacksmith	26	Switz.	Switz.	m	2	2	—	—	3	29	18	laid off
Molder	30	U. S.	U. S.	m	2	2	—	—	2	48	4	sick and holidays
Foreman	23	Switz.	Switz.	m	3	3	—	1	5	48	4	sickness in family
Blacksmith	28	U. S.	Ireland	s	—	—	—	—	—	48	4	accident
"	50	Canada	Canada	wr	6	5	1	—	5	51	1	holidays
Boiler-shop helper	15	U. S.	U. S.	s	—	—	—	—	—	47	5	laid off
Pattern maker	37	"	"	m	—	—	—	—	1	52	—	—
Painter	16	"	"	s	—	—	—	—	—	39	13	at school
Laborer	52	"	"	m	1	1	—	—	1	39	13	no work
"	31	Germany	Germany	m	1	1	—	—	2	34	18	"
Teamster	32	U. S.	U. S.	s	—	—	—	2	2	50	2	vacation
Painter	43	"	England	m	1	1	1	1	3	51	1	holidays
LANSING WHEEL CO.												
Finisher	30	"	U. S.	m	2	2	1	—	3	39	13	shut down and sick
"	43	"	"	m	2	2	1	—	3	33	20	laid off
"	32	"	"	m	—	—	—	—	1	41	11	sick and shut down
Carpenter	32	"	"	m	—	—	—	—	1	49	3	laid off and vacation
Polisher	40	"	"	m	2	2	1	1	4	35	17	laid off
"	24	"	"	m	—	—	—	—	1	39	13	"
Wood worker	34	"	"	m	—	—	—	—	1	44	8	"
Wheel marker	27	"	"	m	—	—	—	—	1	39	13	"
Wood worker	50	"	Germany	m	4	3	3	—	4	46	6	shut down
Polisher	21	Canada	Canada	m	1	1	—	—	2	46	6	"
Wood worker	42	U. S.	U. S.	m	3	3	1	—	4	42	10	laid off
Spoke sorter	23	"	"	m	1	1	1	—	2	37	15	laid off and sick
Spoke driver	24	"	"	m	1	1	—	—	2	43	9	laid off
"	31	England	Ireland	m	1	1	—	—	2	37	15	"
Hub driller	43	U. S.	U. S.	m	3	3	2	—	4	47	5	sick
Rimmer	23	"	"	m	—	—	—	—	1	45	7	laid off
"	37	"	"	m	3	3	2	—	4	42	10	shut down
Laborer	27	"	"	m	1	1	—	—	2	43	4	sick and out of work
"	32	"	"	m	2	2	2	—	3	19	33	sick and laid off
Hub turner	22	"	Germany	m	—	—	—	—	1	46	6	laid off and sick
Hub compressor	32	"	U. S.	m	—	—	—	—	1	39	13	laid off
Hub turner	21	"	France	m	—	—	—	1	2	45	7	laid off and vacation
Night watch.	47	"	U. S.	m	1	1	—	—	2	39	13	laid off and sick
Fireman	58	Germany	Germany	m	3	3	2	—	4	44	8	laid off
Laborer	26	U. S.	U. S.	m	1	1	—	—	2	44	8	sick and laid off
Riveter	17	"	"	s	—	—	—	—	—	48	4	laid off
"	21	"	Ireland	s	—	—	—	4	4	9	43	out of work
Wood worker	21	"	"	s	—	—	—	—	—	43	9	laid off and sick
"	23	"	"	s	—	—	—	—	—	18	34	out of work
Polisher	24	"	U. S.	s	—	—	—	—	—	52	—	—

TABLE No. 5.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt. 't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$585 00		\$585 00	\$335	\$1500			\$250								\$2300
8 40	361 20		361 20					40		\$3 50						40
10 00	490 00		490 00	415				75	\$6 00							350
12 00	588 00	\$30	618 00	520	850	\$275	\$98				\$575	1	\$4 00			800
15 00	450 00		450 00	450										15		200
15 00	450 00		450 00													200
7 50	390 00	8	398 00					100		4 00				20		300
6 00	240 00		240 00					*		3 00	500	1	4 00	1		100
10 50	525 00		525 00					100		3 50						300
13 00	468 00		468 00	318	800	800	150				500	1	4 00	8		500
12 00	576 00		576 00	576					10 00							
25 00	1200 00		1200 00	840	1400		60	300			2000	1	4 00	8	\$50	2000
9 00	432 00		432 00							3 50	1000	1	5 00			300
13 50	658 50		658 50	638				50	12 50		2000	1	3 00	35		1000
4 50	211 50		211 50					25		2 50						
12 00	624 00		624 00	449	2000		25	150			3000					3000
6 00	234 00		234 00					25		2 50						100
9 00	351 00		351 00	351					8 00							400
8 00	302 00		302 00	272					7 50		500	1	4 00	8		200
10 50	525 00		525 00	263				262								600
12 00	612 00		612 00	387	1500		25	200	6 00		3000					4000
9 00	351 00		351 00	312	1000	550	38									1000
9 00	288 00		288 00	238					9 00							700
7 50	307 50		307 50	207	1000	600	100									800
9 00	441 00		441 00	441					7 50		1000					800
15 00	525 00		525 00	525					7 00							500
10 00	390 00	84	474 00	474					free							170
13 50	584 00		584 00	494	1000	500	100				3000					600
13 50	526 50	47	573 50	360				213	8 00							1400
8 50	391 00	144	535 00	245	1000	300	290									1200
15 00	690 00		690 00	340	1200		150	200						6	150	3000
12 00	504 00		504 00	344	600		160									900
7 50	277 50		277 50	275	1500											2000
12 00	516 00		516 00							7 00						200
14 00	518 00		518 00													500
6 00	282 00	25	307 00	282	200		25		10 00		1000	2	8 00	30		450
12 00	540 00		540 00	540												300
12 00	504 00		504 00	504					9 00		500					300
7 50	360 00		360 00	260				100	7 50							1000
6 00	114 00		114 00	250	450	400										150
10 00	460 00		460 00	385				75	8 00							400
7 50	292 50		292 50	292					7 00		5000					800
12 00	540 00		540 00	490	1400			50								1650
7 50	292 50		292 50	242				50	12 00							200
8 00	352 00	200	552 00	452	1300		100							57		2000
7 00	308 00		308 00	308					3 00							125
6 00	288 00		288 00													
13 50	121 50		121 50							2 50						25
8 00	344 00		344 00							4 00						100
6 00	108 00		108 00							3 50						25
8 00	416 00		416 00					30		3 50		1	5 00			40

* Lives at home and gives wages to parents.

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Polisher	30	U. S.	Ireland	s						43	9	laid off and sick
"	21	"	"	s						28	26	out of work
"	18	"	U. S.	s						43	9	laid off
Wood worker	19	"	"	s						45	7	out of work
Finisher	26	"	Ireland	s						28	24	"
Rim borer	17	"	U. S.	s						46	6	laid off and holidays
Laborer	15	"	Germany	s						47	5	shut down
Wood worker	15	"	U. S.	s						46	6	"
Wheel inspector	13	"	"	s						39	13	"
Finisher	29	"	"	s						45	9	out of work
Spoke driver	15	Germany	Germany	s						14	38	at school
Wood worker	15	U. S.	Ireland	s						46	6	shut down
Sawyer	17	Germany	Germany	s						44	8	laid off
Laborer	14	"	"	s						35	17	at school
Hub borer	14	U. S.	U. S.	s						46	4	laid off
Wood worker	18	"	"	s						36	16	sick and laid off
Spoke strengthener	21	"	"	s						46	4	shut down
Spoke selector	26	"	Germany	s						52		"
Machinist	24	"	Ireland	s						46	4	laid off and vacation
Laborer	16	Canada	Canada	s						43	9	laid off
Hub mortiser	29	U. S.	Germany	s						46	4	"
Rim finisher	30	"	Ireland	s						39	13	"
Rim planer	19	"	U. S.	s						44	8	"
Spoke sorter	16	"	Ireland	s						17	35	out of work & at school
Rimmer	19	"	Germany	s						47	5	laid off
"	21	"	"	s				1	1	44	8	out of work
Finisher	23	Ireland	Ireland	s						40	12	"
"	18	Canada	"	s						44	8	shut down & vacation
LANSING WAGON WORKS.												
Engineer	68	U. S.	U. S.	wr	1	1		1	2	49	3	sick
Wood worker	32	"	"	m	4	4	2		5	48	4	"
Laborer	29	Canada	Germany	m	2	2			3	12	40	accid't & other business
Wood worker	51	Germany	"	m	2	2			3	49	3	sick
"	49	U. S.	U. S.	m	2	1	1		2	43	9	sick and laid off
"	41	Germany	Germany	m	1	1			2	46	6	"
"	42	U. S.	U. S.	m	3	3	1		4	39	13	no work
Laborer	40	Germany	Germany	m	6	6	2	1	8	48	4	laid off
Wood worker	42	"	"	m	6	6	3		7	46	6	sick and laid off
"	18	"	"	s						48	4	laid off
"	18	U. S.	U. S.	s						48	4	sick and no work
"	18	"	"	s						51	1	holidays
"	33	"	Germany	m	2	2			3	45	7	laid off
Laborer	36	Germany	"	m	1	1			2	41	11	laid off and sick
Blacksmith	39	U. S.	"	m	3	3	3	1	5	49	3	sick and laid off
Lumber inspector	40	"	U. S.	m	3	3	3		4	43	9	laid off
Laborer	42	Germany	Germany	m					1	39	13	no work
Painter	17	"	"	s						48	4	laid off
Carriage trimmer	39	U. S.	U. S.	m	1	1	1		2	40	12	"
Laborer	34	Germany	Germany	m	5	5	2		6	34	18	no work
"	40	"	"	m	3	3	3		4	40	3	sick
Painter	47	"	"	m	3	3			4	39	13	laid off
Wood worker	33	U. S.	U. S.	m	3	3	1		4	48	4	shut down & holidays
"	16	"	"	s						39	13	sick and laid off

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth,
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
12 00	\$516 00		\$516 00					\$50		\$4 00						\$400
12 00	312 00		312 00							3 75						75
12 00	516 00		516 00							3 75						75
8 00	270 00		270 00							3 00						200
9 00	252 00		252 00					105		3 00						
7 00	322 00		322 00					26		4 00						
4 50	211 50		211 50							4 00						
4 50	207 00		207 00					10		4 00						
15 00	535 00		535 00							4 00						400
8 00	344 00		344 00							4 00						3500
3 00	42 00		42 00					*		*					6	
4 50	207 00		207 00					*		*					9	
4 00	176 00		176 00					*		*						
3 50	122 50		122 50					*		*						
2 40	115 20		115 20					*		*						
6 00	216 00		216 00							†						50
4 50	216 00		216 00							†						200
12 50	702 00		702 00							4 25						200
15 00	720 00		720 00					250		4 00						500
5 50	236 50		236 50							3 00						
9 00	423 00	\$210	642 00					300		3 00		1	\$3 00			1000
12 50	526 50		526 50					50		4 50						200
6 00	264 00		264 00					30		3 00						180
4 50	76 50		76 50							2 00						300
12 00	564 00		564 00							4 00						100
10 00	440 00		440 00							3 50						100
12 00	480 00		480 00							3 50	\$1500			16		100
9 00	396 00		396 00					40		3 00				4		70
10 00	490 00		490 00	\$490					\$3 00							400
8 00	384 00		384 00	304				80	\$6 00							500
12 00	144 00	356	500 00	500	\$300	\$500	85					1	3 50	3	\$500	800
8 10	306 90		306 90	271	700		125							9		900
9 00	387 00	72	459 00	389	650	150	120									1000
9 00	414 00		414 00	374				40	6 00					1	21	100
12 00	468 00	120	588 00	588	800											1200
8 00	294 00	250	634 00	538	800	500	100							5		500
11 40	524 40		524 40	524	700									6	200	1000
7 00	336 00		336 00							2 50				6		100
10 00	480 00		480 00					50		free						100
6 00	306 00		306 00					100		3 00						1300
12 00	540 00	20	560 00	450	1000						500	1	4 00			500
8 00	328 00	50	378 00	278	800	500	100				500	1	4 00	5	50	500
10 50	514 50	115	629 50	479	1800	900	150				500	1	4 00			2000
9 00	387 00		387 00	287				100	8 00		5000	1	25 00			500
6 76	263 64		263 64	200	400		63							7		500
4 50	216 00		216 00							4 00				7		
13 00	520 00		520 00	520					11 00		2000					
7 50	255 00		255 00	255					6 00					5		100
8 00	392 00		392 00	292	800	300	100				800	2	7 00	7	50	800
6 90	269 10	400	669 10	534	600	280	50	85						7	200	800
12 00	576 00		576 00	376				200	10 00							1000
7 50	292 50		292 50							2 50						

* Lives at home and gives wages to parents. † Lives at home and pays no stated amount for board.

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Shipping clerk	41	U. S.	U. S.	s	—	—	—	—	—	51	1	holidays
Teamster	41	"	"	m	2	2	—	—	3	43	4	sick
Wood worker	19	Germany	Germany	s	—	—	—	—	—	39	13	laid off
Blacksmith	44	U. S.	U. S.	m	6	2	—	—	7	43	9	laid off and sick
"	18	"	"	s	—	—	—	—	—	39	13	laid off and no work
"	37	Scotland	Scotland	m	2	2	—	—	2	50	2	holidays and laid off
"	40	U. S.	U. S.	m	2	2	1	—	3	49	3	laid off and holidays
"	27	"	Germany	m	2	2	—	—	1	45	6	"
"	29	Germany	"	m	2	2	—	—	3	34	18	laid off
Laborer	46	"	"	m	3	6	5	—	3	30	22	sick and laid off
Machine hand	15	"	"	s	—	—	—	—	—	46	4	laid off
Wood worker	38	"	"	m	5	5	4	—	6	45	7	laid off and holidays
"	43	"	"	m	7	7	4	—	8	49	3	laid off
"	29	U. S.	"	m	1	1	—	—	2	45	4	laid off and holidays
Shipping clerk	17	Germany	"	s	—	—	—	—	—	39	13	laid off
Foreman of paint shop	40	"	"	m	4	3	2	—	4	49	3	holidays and laid off
Painter	20	Switz.	Switz.	s	—	—	—	—	—	43	9	laid off
"	38	Germany	Germany	wr	3	3	1	1	4	39	13	sickness and laid off
"	41	"	"	m	5	5	1	—	6	46	4	laid off
"	16	U. S.	"	s	—	—	—	—	—	43	9	laid off and sick
"	19	Switz.	Switz.	s	—	—	—	—	—	39	13	"
"	30	Germany	Germany	m	3	3	—	—	4	46	6	sick and laid off
LANSING WHEELBARROW Co.												
Engineer	50	England	England	m	4	4	2	—	5	52	—	—
Wood worker	46	U. S.	U. S.	m	2	2	1	—	3	51	1	holidays
"	18	"	"	s	—	—	—	—	—	34	18	no w'k and at school
Blacksmith	35	Canada	Canada	m	3	3	1	1	5	51	1	holidays
Lumber scaler	45	U. S.	U. S.	m	4	1	1	—	2	50	2	sick and vacation
Shipping clerk	25	"	Ireland	m	2	2	—	—	3	51	1	holidays
Painter	30	"	U. S.	m	—	—	—	—	1	26	26	sick
Wood worker	31	"	Germany	m	1	1	—	—	2	50	2	sick and holidays
Shipping clerk	23	"	Ireland	s	—	—	—	—	—	30	22	no work
Laborer	16	Germany	U. S.	s	—	—	—	—	—	48	4	no work and sick
"	15	"	Germany	s	—	—	—	—	—	43	9	accident and no w'k
Machinist	28	Canada	Canada	m	2	2	—	—	3	49	8	sickness of family
Laborer	40	"	"	m	1	1	—	—	2	51	1	holidays
Blacksmith	52	U. S.	Scotland	m	2	1	—	—	2	48	4	laid off
Machine hand	21	"	U. S.	s	—	—	—	—	—	43	9	no work
Machinist	23	"	"	m	1	1	—	—	2	50	2	vacation
"	29	"	Ireland	m	1	1	—	—	2	49	3	holidays and vacat'n
Blacksmith	25	"	U. S.	wr	1	1	—	1	2	45	7	sick and no work
Machinist	27	"	Germany	m	1	1	—	—	2	5	—	just changed from personal business
"	32	"	"	m	—	—	—	—	1	5	—	just changed from personal business
Wood worker	37	"	U. S.	m	2	2	2	2	5	49	3	laid off
"	24	"	"	m	2	2	—	—	3	39	13	no work
"	44	"	"	wr	2	2	2	2	4	18	34	sickness
Laborer	33	Germany	Germany	m	3	3	1	—	4	43	9	no work
Wood worker	19	U. S.	U. S.	s	—	—	—	—	—	49	3	"
"	28	"	"	m	1	1	—	—	2	48	4	sick and holidays
"	37	"	France	m	—	—	—	—	1	46	6	sick
"	30	"	U. S.	m	—	—	—	—	1	51	1	holidays
"	29	"	"	m	—	—	—	—	1	37	15	no work

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, an't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$2 00	\$459 00		\$459 00		\$1050											\$1200
3 00	384 00		384 00		1000	\$500	\$100									600
5 00	195 00		195 00							\$3 50						1600
12 00	515 00		515 00		415			\$100	\$7 00							700
6 00	234 00		234 00					15		3 00						
13 50	675 00	\$200	875 00	375				500	8 00					33		2000
10 50	514 50		514 50	494	1650	1000		20								3000
7 50	345 00		345 00	245				100	6 00							200
10 50	357 00		357 00	307	900	400	50				\$500	1	\$4 00	5	\$300	600
7 50	225 00	30	255 00	241	500	200	14							15		500
4 80	230 40		230 40					*		*				7		
10 00	450 00		450 00	400	1000			50						8	500	1400
7 50	367 50	200	567 50	627	1000	800								8		900
7 50	360 00		360 00	356	600	600	4									300
4 50	175 50		175 50							3 00				1		
15 00	785 00	120	905 00	655	1700		200							23		2200
6 00	258 00		258 00							3 00				9		
7 50	292 50		292 50	292	1000	650								7	60	650
8 00	384 00		384 00	324	1300		20	40						15	50	1800
6 00	258 00		258 00					70		3 00						100
7 50	292 50		292 50					75		3 00						60
8 00	368 00		368 00	343	800	400		25			500	1	4 00	8	50	700
12 00	624 00		624 00	524	1000	150	100							38		2000
12 00	612 00		612 00	412	1000	200	200									1800
6 78	229 84		229 84					25		2 50						1000
14 00	714 00	50	764 00	704					9 00					4	300	500
9 00	450 00		450 00	450					5 00			1	6 00			500
9 00	459 00		459 00	450					free							600
7 50	195 00		195 00	182					6 00							400
7 50	875 00		875 00	275	750	100	100									1250
7 50	225 00	45	270 00					*		2 50						600
4 50	216 00		216 00					*		*				8		
3 60	154 80		154 80					*		*				8		
10 50	514 50		514 50	364	900		150							22		1200
6 00	306 00		306 00						8 00					4	500	250
15 00	730 00	72	802 00	492				300	12 00		2000					2500
5 00	215 00	100	315 00					71		†						5000
8 00	400 00		400 00	525					7 00							500
9 00	441 00	125	566 00	341				100	5 00		1000	1	5 00			1000
8 00	360 00		360 00	256	800	425	104									400
10 50	52 50		52 50		1100	400										1200
10 50	52 50		52 50		1000	200										1800
14 00	696 00		696 00	496				200	8 00		3000					800
7 50	292 50		292 50	292	900	150										1000
9 00	182 00	120	302 00	282	750											900
7 50	322 50		322 50	322					5 00					2	50	100
7 50	367 50		367 50							3 00						100
7 50	360 00		360 00	260					5 00			1	6 00			400
7 50	345 00	40	385 00	325	550	300	60									1000
8 10	413 10		413 10	413					5 00							600
7 50	277 50	7	284 50	219				65	5 00							500

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker	35	U. S.	U. S.	m	1	1	1		2	48	4	laid off
"	25	"	"	m	1	1			2	48	4	sick and vacation
Painter	13	"	"	s						18		first work
"	21	"	Germany	m	2	2	1		3	52		
Wood worker	24	"	Ireland	m	2	2	2		4	49	3	laid off on own acc't
"	39	"	Germany	m	3	3	2		4	45	7	short time
"	27	"	U. S.	s						48	4	vacation
"	44	"	"	m	3	3	2		4	39	13	sickness
"	28	"	"	m					1	50	2	vacation
"	31	"	"	m				1	2	52		
"	23	"	France	m					1	50	2	laid off
"	44	"	U. S.	m	2	2	2	1	4	38	14	sick and holidays
"	24	"	"	s						34	18	sick and accident
"	24	"	"	m	1	1			2	48	4	laid off
"	21	"	"	s						51	1	sick and holidays
"	24	Germany	Germany	s				1	1	42	9	sick and laid off
"	39	U. S.	U. S.	m	1	1	1		2	34	18	no work
CLARK & Co.												
Blacksmith	33	"	"	m	1	1	1		2	48	4	laid off
"	21	"	"	s						50	2	"
"	47	England	England	s						51	1	sick
Machinist	24	Germany	Germany	m	1	1			2	43	9	laid off
Blacksmith	21	U. S.	U. S.	s				2	2	48	9	sick and laid
"	43	Germany	Germany	m	4	3	2		4	50	2	holidays
"	40	U. S.	U. S.	m	3	3	2		4	51	1	"
"	20	"	"	s						18	34	accident
"	40	"	"	m	3	3	1	1	5	40	12	laid off
"	30	England	England	m	1	1		1	3	49	8	laid off and sick
Painter	23	U. S.	U. S.	m				1	2	50	2	holidays and sick
"	42	"	"	m	1	1	1		2	49	3	sick and laid off
"	33	"	"	m	1	1		2	4	45	7	sickness in family
"	23	"	"	m					1	49	3	and holidays
"	21	"	"	m					1	50	2	sick and holidays
"	18	Germany	Germany	s						49	3	no work & vacation
"	39	U. S.	U. S.	m	1	1	1		2	49	3	vacation
"	22	Germany	Germany	s						48	4	sick and laid off
"	31	U. S.	U. S.	m	3	3	1		4	50	2	laid off
"	18	Germany	Germany	s						48	4	vacation
"	33	U. S.	Canada	m	4	4	1		5	50	2	laid off and sick
"	40	"	U. S.	wr	1	1	1		1	50	2	holidays and laid off
"	37	"	France	m	2	2	1		3	53		"
"	43	"	U. S.	m	5	5	2		6	50	2	sick and laid off
Wood worker	28	"	"	m	2	2			3	39	13	vacation
"	19	"	"	m	1	1		2	4	46	6	laid off
"	48	"	Holland	m						46	6	"
Carriage trimmer	22	"	U. S.	s						50	2	holidays and laid off
"	19	"	Germany	s						50	2	laid off
"	19	"	England	s						50	2	laid off and holidays
"	27	"	U. S.	s						48	9	laid off and vacation
"	26	"	"	s						46	6	sick, vacation & laid off
"	18	Canada	"	s						50	2	laid off and holidays
Laborer	35	U. S.	Scotland	m	1	1	1		2	52		

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$360 00		\$360 00	\$360					\$7 00							\$200
9 00	432 00		432 00	432	\$300	\$75	\$125									400
3 60	57 60		57 60	57 60						\$2 00						2000
15 00	780 00		780 00	280	2000	800	500									1000
12 00	588 00		588 00	438				\$150	7 00							
9 00	405 00		405 00	405	300	300										600
12 00	576 00		576 00	576				300		4 12						600
7 50	292 50	\$144	436 50	436					6 00		\$3000					500
10 50	525 00		525 00	525					9 00		1000					500
10 00	520 00		520 00	270	1500		250									2500
7 50	375 00		375 00	275				100	3 50							100
7 50	285 00		285 00	285	700											1000
12 00	408 00		408 00					100		4 12						100
7 50	360 00	12	372 00	257				115	7 00							500
7 50	382 50	72	454 50					40		2 00						800
8 25	354 75		354 75	228	500		128							6		600
10 00	340 00		340 00	340	450											
13 00	576 00	223	799 00	539	1000	625	170	90				1	35 00			1200
12 00	600 00		600 00							3 50						200
12 00	612 00		612 00							4 00						100
8 00	344 00		344 00	269	1100	800	75				500	1	4 00	27	\$100	900
7 50	323 50	270	592 50	533				60	8 00					4		400
13 00	650 00		650 00	350	1000	325	300				500	1	4 00	33		800
9 00	469 00	60	519 00	469				50	8 00							1000
9 00	162 00		162 00							3 50						50
7 50	300 00		300 00						6 25							200
15 00	735 00		735 00	435	1600	600	100	150			1000			24		1600
8 00	400 00		400 00	360	550	510	40									200
8 00	392 00		392 00	392	600						3000					800
8 00	360 00		360 00	360					10 00		3000					500
7 00	343 00		343 00	279				64	7 00							200
7 00	350 00		350 00	350					7 00							500
5 00	245 00		245 00					20		3 00				9		
8 00	392 00		392 00	392					8 00							40
8 00	384 00		384 00							5 00				5		
11 00	550 00		550 00	520				80	7 00		1000	1	5 00	9		500
5 00	240 00		240 00													
11 00	550 00		550 00	525	1100	700	25				3000					1600
13 50	650 00		650 00					50		7 00						2500
11 00	572 00		572 00	532	1500		40				3000					1100
10 00	500 00		500 00	430	800		450									1500
14 00	546 00		546 00	446	800	700	100									
6 50	299 00		299 00	299					2 50							70
15 00	690 00		690 00	690	1200						4000					2000
10 50	525 00		525 00					100		↑						500
9 00	450 00		450 00					50		2 00						50
5 40	270 00		270 00							↑						
18 00	559 00		559 00					150		↑						500
13 50	621 00		621 00							4 75						
4 00	200 00		200 00							↑						
9 00	468 00	222	690 00	440	2000		100	150						2		3500

* Gives wages to parents and lives at home.

† Lives at home and pays no stated amount for board.

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
CAPITOL WAGON CO.												
Laborer	19	U. S.	U. S.	s	—	—	—	—	—	51	1	holidays
"	28	"	"	s	—	—	—	—	—	46	6	sick and laid off
Carriage trimmer	53	"	"	m	2	2	—	—	—	51	1	holidays
Painter	33	Canada	England	m	1	1	—	—	—	50	2	laid off & vacation
"	45	U. S.	U. S.	m	4	4	4	—	5	51	1	laid off
"	26	Canada	Canada	s	—	—	—	—	—	42	10	no work
"	34	"	England	m	—	—	—	1	2	38	13	laid off
Engineer	63	U. S.	U. S.	m	—	—	—	—	1	26	26	no work
Polisher	34	England	England	s	—	—	—	—	—	47	5	vacation
Wood worker	28	U. S.	Germany	s	—	—	—	—	—	26	26	out of work
"	29	"	U. S.	s	—	—	—	3	3	46	6	sick and laid off
Laborer	22	"	Ireland	s	—	—	—	1	1	31	21	on strike & out of work
Wheel dresser	18	"	U. S.	s	—	—	—	—	—	39	13	sick
Painter	21	Canada	Canada	s	—	—	—	—	—	48	4	vacation
Box maker	21	U. S.	U. S.	s	—	—	—	—	—	35	16	out of work
Wood worker	17	"	"	s	—	—	—	—	—	39	18	"
"	38	"	"	m	2	2	2	—	3	52	—	—
Machinist	30	"	"	m	2	2	—	—	—	49	3	out of work
Wood worker	46	"	"	m	4	4	3	—	5	50	2	laid off
Laborer	42	"	"	m	4	4	3	—	5	49	3	sick
Blacksmith	39	"	"	m	1	1	—	—	2	50	2	holidays
"	38	"	"	m	1	1	1	—	3	51	1	sick and holidays
"	33	"	"	m	—	—	—	—	—	46	4	laid off
Wood worker	39	"	"	m	3	3	3	—	4	31	21	sick
"	26	"	"	m	1	1	—	—	2	50	2	vacation
Wheel wright	24	"	"	m	—	—	—	—	1	48	4	sick
Wood worker	31	"	"	m	1	1	—	—	2	43	9	sick and out of work
"	25	"	Germany	m	—	—	—	—	1	48	4	sick
"	24	"	"	m	—	—	—	—	1	23	30	in business for self
Painter	26	"	U. S.	m	—	—	—	—	1	43	9	out of work and sick
"	30	"	"	m	—	—	—	—	1	51	1	sick and vacation
"	50	Germany	Germany	m	8	6	4	—	7	49	3	laid off
Wood worker	62	"	"	m	2	1	—	—	2	48	4	out of work
Blacksmith	52	Canada	Canada	m	1	1	1	—	2	53	—	—
"	47	Germany	Germany	m	4	4	2	—	5	48	4	laid off
Laborer	25	"	"	m	1	1	—	—	2	26	26	out of work
"	33	U. S.	U. S.	m	2	2	—	—	3	39	13	"
Teamster	38	"	"	m	—	—	—	—	1	51	1	"
Laborer	39	"	"	m	4	4	2	—	5	44	8	laid off and sick
Shipping clerk	53	"	"	m	1	1	—	—	2	52	—	—
Laborer	36	Germany	Germany	m	2	2	2	—	3	14	—	first work in U. S.
"	39	"	"	m	4	4	3	—	5	41	11	out of work
Painter	53	U. S.	U. S.	m	1	1	—	1	3	39	18	"
ANDERSON ROAD CART CO.												
Painter	26	U. S.	"	m	—	—	—	—	1	26	26	vacation
"	22	Canada	England	s	—	—	—	—	—	48	4	laid off and holidays
Laborer	49	U. S.	U. S.	m	1	1	1	—	2	50	2	sick and vacation
Painter	15	"	"	s	—	—	—	—	—	50	23	at school and laid off
Wood worker	20	"	"	s	—	—	—	2	2	50	2	laid off and sick
"	44	"	"	m	—	—	—	2	3	39	18	out of work

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$7 50	\$283 50		\$283 50							\$3 50					\$100
9 00	414 00		414 00							4 00					100
15 00	785 00		785 00	\$765					\$12 00		\$7500				2600
11 00	550 00		550 00	538	\$600		\$12								880
12 00	612 00	\$98	708 00	608				\$100	10 00	3 50	2000	1	\$3 00	24	1000
11 00	463 00		463 00					100							150
11 00	429 00		429 00	429					7 00					25	400
9 00	224 00		224 00	224					8 00						200
7 50	293 50		293 50							3 25	1200	1	10 00	9	
9 00	234 00		234 00					30		3 00					500
12 50	621 00		621 00	571	600	\$550	50								380
6 00	196 00		196 00							4 00					
9 00	361 00		361 00							3 00					
9 00	428 00		428 00					100		4 00				4	\$40
7 50	293 50		293 50							8 00					100
4 00	156 00		156 00							free					
15 00	780 00		780 00	640	800	300	40	100			1000				1000
7 50	367 50		367 50	237	1000	800	180								380
10 00	500 00	177	677 00	634	1800		48								2600
7 50	367 50		367 50	407					6 00						
12 00	600 00		600 00	600					9 00		3000				380
7 50	392 50	150	542 50	352	800	250	150				1000				1000
9 00	432 00		432 00	373				60	6 50						
9 00	279 00		279 00	279					8 00						560
12 00	600 00	60	660 00	536				125	7 00						1000
12 00	576 00		576 00	476				100	8 00						1500
7 50	322 50		322 50	232	1000	370	100								900
10 50	504 00		504 00	504					5 00						700
14 00	308 00	144	452 00	452					4 00						2000
7 50	322 50		322 50	322					8 00						100
15 00	765 00		765 00	465				300	12 50						2500
10 00	490 00	100	590 00	590	4000	1500								34	300
13 50	648 00		648 00	648	3000	500								50	3300
15 00	780 00		780 00	580	1000		150	100						31	3000
12 00	576 00		576 00	576	1200									21	2000
7 50	196 00		196 00	196					6 00					7	25
7 50	292 50		292 50	292					5 00						150
7 00	837 00		837 00	817				40	3 00						80
7 00	306 00		306 00	278				20	5 00						250
15 38	800 00	75	875 00	625				250	8 00						1200
7 00	98 00		98 00	896					4 00					4 mo	20
7 50	307 50		307 50	245	300	250	62							8	1000
6 00	234 00		234 00	234					4 50						100
7 00	182 00		182 00	182					free						100
10 50	504 00		504 00					75		8 50				17	600
8 00	400 00	48	448 00	448					8 00						400
5 00	150 00	25	175 00							8 25					
6 00	300 00		300 00	300											50
12 00	468 00		468 00	468	1000				free		3000				1500

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Blacksmith.....	45	U. S.	U. S.	m	2	5	4		6	50	2	laid off and holiday
".....	37	"	"	m	2	2			3	50	2	sick and laid off
".....	27	"	"	m					1	50	2	laid off
".....	23	"	"	s						50	2	sick
Wheel maker.....	63	"	"	wt						48	4	laid off
Laborer.....	19	"	"	s				1	1	48	4	sick and holidays
Shipping clerk.....	25	"	"	s						51	1	holidays
Blacksmith.....	28	"	"	m	2	2			3	50	2	sick
Night-watch.....	50	"	"	m	4	4	2		5	53		
BUSH ROAD CART CO.												
Blacksmith.....	32	"	England	m					1	52		
Painter.....	25	Canada	Canada	s						46	6	no work and sick
".....	21	U. S.	Germany	s						48	4	vacation
Wood worker.....	23	Canada	England	s						48	4	sick and vacation
Blacksmith.....	24	U. S.	"	m					1	30	22	laid off
CADY, WAY & CO.												
Molder.....	18	"	Ireland	s						39	13	"
".....	29	"	U. S.	m					1	37	15	"
".....	27	"	"	m	1	1			2	39	13	laid off and accident
".....	24	"	"	s						48	4	no work
P. F. OLDS & SON.												
Molder.....	30	"	England	m	1	1			2	39	13	"
".....	30	"	Germany	m	2	2			3	48	4	sick and laid off
Machine hand.....	24	"	U. S.	s						18	34	at school
Molder.....	19	"	"	s						43	9	sick and laid off
Machinist.....	24	"	"	m	1	1		1	3	43	9	vacation
".....	33	"	"	m	3	3	1		4	39	13	sick
".....	20	"	"	s						50	2	vacation
Pattern maker.....	60	"	"	m					1			is badly crippled, can not work much.

TABLE No. 5.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 50	\$675 00	-----	\$675 00	\$675	-----	-----	-----	-----	\$10 00	-----	-----	-----	-----	-----	-----	\$500
10 00	500 00	-----	500 00	350	\$350	\$200	\$150	-----	6 50	-----	-----	-----	-----	-----	-----	800
10 00	500 00	-----	500 00	400	-----	-----	-----	\$100	-----	-----	-----	-----	-----	-----	-----	600
7 00	350 00	-----	350 00	-----	-----	-----	-----	50	-----	\$8 50	-----	-----	-----	-----	-----	100
9 00	432 00	\$80	492 00	-----	-----	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	1000
6 00	288 00	-----	288 00	-----	-----	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	75
10 00	510 00	130	640 00	-----	-----	-----	-----	170	-----	2 50	-----	-----	-----	-----	-----	170
8 50	425 00	-----	425 00	375	-----	-----	-----	50	8 00	-----	-----	-----	-----	-----	-----	300
8 75	455 00	-----	455 00	405	600	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1000
9 00	468 00	-----	468 00	198	-----	-----	-----	275	3 50	-----	\$2500	-----	-----	-----	-----	1000
8 00	368 00	125	493 00	-----	-----	-----	-----	200	-----	3 50	-----	-----	-----	-----	-----	200
8 00	384 00	-----	384 00	-----	-----	-----	-----	-----	-----	4 00	-----	-----	-----	-----	-----	50
12 00	576 00	-----	576 00	-----	-----	-----	-----	-----	-----	4 00	-----	-----	-----	-----	-----	400
12 00	360 00	-----	360 00	360	-----	-----	-----	-----	11 00	-----	-----	-----	-----	-----	-----	250
7 50	292 50	-----	292 50	-----	-----	-----	-----	200	-----	5 00	-----	-----	-----	-----	-----	-----
13 50	499 50	100	599 50	299	-----	-----	-----	300	10 00	-----	-----	-----	-----	-----	-----	700
12 50	525 50	-----	525 50	398	750	150	180	-----	-----	-----	100	-----	-----	-----	-----	1000
7 50	360 00	-----	360 00	-----	-----	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	250
10 00	390 00	-----	390 00	340	-----	-----	-----	50	7 00	-----	-----	-----	-----	-----	-----	400
12 50	702 00	-----	702 00	448	-----	-----	-----	200	8 00	-----	100	-----	-----	-----	-----	600
4 00	72 00	-----	72 00	-----	-----	-----	-----	-----	-----	8 00	-----	-----	-----	-----	-----	200
6 00	258 00	-----	258 00	-----	-----	-----	-----	100	-----	†	-----	-----	-----	-----	-----	250
15 00	645 00	-----	645 00	345	3000	-----	300	-----	-----	-----	-----	-----	-----	-----	-----	4000
12 00	468 00	-----	468 00	368	1500	300	100	-----	-----	-----	2000	-----	-----	-----	-----	2000
9 00	450 00	-----	450 00	-----	-----	-----	-----	-----	-----	8 25	-----	-----	-----	-----	-----	50
-----	50 00	\$80	410 00	410	-----	-----	-----	-----	7 50	-----	-----	-----	-----	-----	-----	400

† Lives with parents and pays no stated amount for board.

LANSING.

Five hundred and thirty-eight employ  s were canvassed: Cady, Way & Co. (manufacturers of engines, plows, picket mills and merry-go-rounds), 4; Bush Road Cart Co. (manufacturers of road wagons and carts), 5; P. F. Olds & Son (manufacturers of gasoline engines and boilers), 8; Anderson Road Cart Co. (manufacturers of road carts), 15; Capital Wagon Co., 35; Clark & Co. (manufacturers of carriages and cutters), 42; Lansing Wagon Works (manufacturers of farm and spring wagons), 46; Lansing Wheelbarrow Co. (manufacturers of wheelbarrows, warehouse trucks and hand carts), 46; Lansing Wheel Co., 58; Lansing Iron and Engine Works (manufacturers of engines, boilers, saw mills, pumps, etc.), 65; E. Bement & Sons (manufacturers of farm implements and stoves), 214.

Nationality: Americans, 335; Germans, 138; Canadians, 33; Irishmen, 12; Scotchmen, 1; Englishmen, 10; Swiss, 5; Danes, 2; Swede, 1; Polander, 1. 62+ per cent are Americans and 38- per cent are foreigners. Of the foreigners 68- per cent are Germans; 16+ per cent, Canadians; 6- per cent, Irishmen; 5- per cent, Englishmen; 2+ per cent, Swiss, and less than one per cent each, Dane, Scotch, Swede and Polish. Parentage of those born in the United States: American, 251; German, 35; Irish, 24; English, 12; Canadian, 5; French, 5; Scotch, 2; Holland, 1. 75- per cent have American and 25+ per cent have foreign parents. Three hundred and thirty-three employ  s are married, 190 single and 15 widowers; 62- per cent are married, 35+ per cent single and 3- per cent widowers. There are employed ten boys 15 years of age and one 13 years. One hundred and seventy-seven support self only, 12 support others than self by boarding and 349 support families: Americans, 219; Germans, 94; Canadians, 20; Irishmen, 6; Englishmen, 5; Swiss, 3; Scotchmen, 1; Polander, 1. In 349 families there are 706 children, of whom 654 are supported. Sixty-six married men have no children: 57 or 86+ per cent are Americans; 4 Germans, 4 Canadians, 1 Irishman. Of the children supported 227 are under 5 years of age; 415 are 5 and under 20, and 12 are over 20. Two hundred and eighty-eight attend school, which is 69+ per cent of school age. Two hundred and eighty-six attend the public schools, 2 parochial. Number of persons supported in families, 1,061; by boarding, 19. Sixty-seven employ  s support 95 persons besides wife and children. Total number of weeks worked during the year, 23,202; average, 43.1+. Four hundred and ninety-three men, or 95+ per cent, lost 4,211 weeks or 80 years and 51 weeks. Cause of lost time: No work, 52; laid off, 143; sickness, 47; sickness and laid off, 64; holidays, 20; holidays and laid off, 35; vacation, 23; sickness and no work, 16; holidays and sickness, 18; holidays and accident, 1; accident, 5; sickness, holidays and laid off, 1; accident and laid off, 7; other work, 9; sickness, accident and laid off, 1; shut down and sickness, 3; shut down, 9; shut down and holidays, 1; sickness and vacation, 7; at school, 8; on strike, 1; worked for self, 1; laid off and vacation, 6; no work and vacation, 1; holidays and vacation, 7; accident and sickness, 2; accident and no work, 2; short hours, vacation and laid off, 1; short hours, 1; shut down and vacation, 1.

Total annual earnings, \$218,520.81; average, \$406.17. Total income from other resources, \$12,264, as follows: Family earnings, \$3,300; boarding, \$2,824; heirship, \$900; pensions, \$1,465; interest, \$543; rent, \$1,740; other sources, \$1,492. Total annual earnings of Americans, \$140,143.80; average, \$418.34; Germans, \$47,288.79; average, \$342.67; Canadians, \$14,251.02; average, \$431.84; Irishmen, \$6,080.50; average, \$506.70; Englishmen, \$5,034.70; average, \$503.47; Swiss, \$2,863.50; average, \$572.70; Danes, \$871.50; average, \$435.75; Scotchmen, \$675; average, \$675; Swede, \$1,000; average, \$1,000; Polander, \$312; average, \$312. Average weekly wages of married men, \$9.96; single men, \$8.06;

all employes, \$9.29. Wages paid per week: One employe, \$2.40; seven, \$3; three, \$3.50; two, \$3.60; five, \$4; ten, \$4.50; one, \$4.80; one, \$4.85; four, \$5; two, \$5.40; one, \$5.50; one, \$5.80; forty, \$6; two, \$6.50; one, \$6.60; twelve, \$6.76; one, \$6.90; twenty-three, \$7; three, \$7.37; eighty-one, \$7.50; forty-three, \$8; two, \$8.10; three, \$8.25; one, \$8.40; three, \$8.50; one, \$8.75; seventy-two, \$9; one, \$9.40; one, \$9.50; thirty-nine, \$10; twenty-one, \$10.50; ten, \$11; one, \$11.25; one, \$11.40; one, \$11.50; fifty-seven, \$12; eleven, \$13; twenty-one, \$13.50; eleven, \$14; three, \$14.50; twenty-four, \$15; one, \$15.38; three, \$16; one, \$17; one, \$18; two, \$19.23; one, \$24; one, \$25.

Total family expenses, \$137,514; per capita, \$97.53; Americans, \$87,992; per capita, \$112.37; Germans, \$32,837; per capita, \$70.46; Canadians, \$8,793; per capita, \$108.55; Irishmen, \$3,052; per capita, \$113.03; Englishmen, \$2,500; per capita, \$66.15; Swiss, \$1,653; per capita, \$108.31; Polanders, \$312; per capita, \$44.57; Scotchmen, \$375; per capita, \$93.75.

Number owning homes, 190: Americans, 98; Germans, 70; Canadians, 11; Irishmen, 6; Swiss, 3; Englishmen, 2. One hundred and seventy-eight married men, five single men and seven widowers own homes. 53+ per cent of married men own homes. 52-per cent of home owners are Americans and 48+ foreigners. Total value of homes, \$186,500; average, \$981.57; Americans, \$102,200; average, \$1,042.85; Germans, \$64,275; average, \$918.21; Canadians, \$10,775; average, \$979.55; Irishmen, \$3,750; average, \$625; Swiss, \$2,900; average, \$966.66; Englishmen, \$2,600; average, \$1,300. The homes of 135 employes are mortgaged, which is 71+ per cent. Value of mortgaged homes, \$129,500; mortgaged for \$58,626, which is 45+ per cent of valuation. The homes of 69 Americans are mortgaged for \$30,100; 54 Germans, \$23,390; 5 Canadians, \$2,011; 3 Irishmen, \$1,075; 2 Swiss, \$1,300; 2 Englishmen, \$750. During the year 140 employes made payments and improvements upon homes amounting to \$14,913, and 191 saved \$19,626 in money. Total number of employes who saved, 294, which is 54- per cent. Total savings, including payments and improvements upon homes, \$34,539, which is 16- per cent of total earnings. Total present worth of 468 employes (70 not reporting), \$345,342; average, \$737.91; Americans, 296; total, \$229,682; average, \$775.95; Germans, 114; total, \$72,470; average, \$635.70; Canadians, 29; total, \$23,930; average, \$825.17; Irishmen, 12; total, \$7,150; average, \$595.83; Englishmen, 8, total, \$5,550; average, \$693.75; Swiss, 4; total, \$3,060; average, \$765; Danes, 2; total, \$400; average, \$200; Swede, 1; total, \$800; Scotchman, 1; total, \$2,000; Polander, 1; total, \$300. One employe is worth \$5,000. Fifty-nine Germans had \$6,245 upon arrival in this country; 11 Canadians, \$2,909; 3 Irishmen, \$530; 1 Englishman, \$50; 1 Swiss, \$50; 2 Danes, \$110; 1 Swede, \$800; 1 Polander, \$200. Total present worth of foreigners, \$115,660.

Number renting homes, 151: Americans, 114; Germans, 22; Canadians, 8; Irishmen, 2; Englishmen, 3; Scotchman, 1; Polander, 1. Three renters are single men, three widowers and five have rent free. 43+ per cent of married men rent and 28+ per cent of total employes. Total monthly rent, \$1,131.65; average, \$7.49. Total annual rent, \$13,579.80; average, \$99.92. Per cent of rent to earnings, 20+. Per cent of rent to expenses, 21+. Total monthly rent of Americans, \$858.65; average, \$7.53; Germans, \$133.50; average, \$6.07; Canadians, \$70.50; average, \$6.81; Englishmen, \$24; average, \$8; Irishmen, \$30; average, \$15; Scotchmen, \$6; average, \$6; Polanders, \$7; average, \$7.

Number of employes boarding, 161, which is 30- per cent of total. Nineteen live at home and give wages to parents; nine live at home and pay no stated amount for board. Total weekly board, \$646.49; average, \$3.39; Americans, 102; total, \$346.99; average, \$3.40; Germans, 31; total, \$102; average, \$3.29; Canadians, 10; total, \$36; average, \$3.60; Irishmen, 8; total, \$23.50; average, \$2.93; Englishmen, 5; total, \$18.75; average, \$3.75; Swiss, 2; total, \$6; average, \$3; Danes, 2; total, \$6.25; average, \$4.12; Swede, 1; total, \$5. Sixty-seven keep an itemized account of their expenses, which is 12+ per cent. Two hundred and thirty-eight own sewing machines, which is 68+ per cent of those supporting families. One hundred and twenty-five own musical instruments, which is 23+ per cent. Number of musical instruments: Pianos, 15; organs, 65; violins, 17; guitars, 9; cornets, 7; horns, 8; melodeons, 7; flutes, 2; drums, 2; banjos, 3; accordians, 1; mandolin, 1; xylophone, 1; bass viol, 1; hand organ, 1; harmonica, 1; cello, 1. Number of employes who take newspapers and magazines, 361: Americans, 243; Germans, 70; Canadians, 26; Irishmen, 7; Englishmen, 8; Swiss, 3; Scotch, Swede, Dane and Pole, 1 each. 67+ per cent take newspapers and magazines, of which 68- per cent are Americans. Number of dailies taken, 354; story, 39; sporting, 10; religious, 28; scientific, 28; local and other weekly papers, 72; magazines, 44.

Three hundred and seventy-six work at hand and 117 at machine work and 45 at both. Fifty-three men or 10- per cent have been injured since engaged as employes. Thirteen reported that their labor organization had been of financial benefit to them and 34 no financial benefit. Other than financially, 10 reported that their labor organization had

been of benefit socially and educationally, 10 socially, 4 educationally and 21 no benefit. One hundred and eighteen carry life insurance amounting to \$180,221; average, \$1,527.29; Americans, 69; total, \$130,225; Germans, 35; total, \$30,116; Irishmen, 5; total, \$7,680; Canadians, 4; total, \$7,000; Swiss, 3; total, \$3,000; Englishmen, 2; total, \$2,200; 22- per cent are insured. One hundred and eighteen belong to benefit societies: Americans, 50; total, \$367; average, \$7.34; Germans, 49; total, \$312; average, \$6.37; Canadians, 9; total, \$40; average, \$4.44; Irishmen, 5; total, \$32; average, \$6.40; Swiss, \$3; total, \$12; average, \$4; Dane, 1; total, \$6; Englishman, 1; total, \$10. Total weekly benefit, \$779; average, \$6.60; 22- per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
BAY CITY.

TABLE No. 6.—Showing Individual Reports

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
INDUSTRIAL WORKS.												
Blacksmith	25	U. S.	U. S.	m	1	1			2	52		
Molder	53	"	England	m	3	2	1		3	44	8	laid off
"	30	"	U. S.	m	3	2			4	52		
Core maker	28	Canada	Ireland	m	1	1			1	53		
Pattern maker	68	U. S.	Canada	m	3	1		1	3	52		
"	49	"	U. S.	m	4	2	1		3	52		
"	28	"	"	m	3	2		1	4	50	2	sick
Molder	41	Scotland	Scotland	m	5	5	4		6	52		
"	44	Ireland	Ireland	m	6	4	4		5	52		
Machinist	40	Germany	Germany	m	6	6	4		7	52		
Teamster	29	"	"	m	2	2			3	52		
Blacksmith	45	Ireland	Ireland	m	2	2			1	52		
"	34	"	"	m	2	2	1		3	51	1	sick
Helper	24	Canada	Canada	m	1	1			2	52		
Blacksmith	51	"	England	m	4	4	4		5	52		
Helper	30	"	Canada	m	2	2			3	52		
Blacksmith	30	England	England	m	2	1			2	49	3	sick
Helper	48	Ireland	Ireland	m	2	1	1		2	52		
"	35	Scotland	Scotland	m	6	6	4		7	52		
Blacksmith	44	England	England	m	4	2	2		3	52		
Engineer	35	U. S.	Scotland	m	1	1	1		2	52		
Draftsman	21	"	U. S.	m					1	52		
"	28	"	Holland	m					1	52		
Book-keeper	30	"	U. S.	m	1	1			2	52		
Machinist	40	Canada	Canada	m	2	2	2		3	52		
"	36	Germany	Germany	m	4	4	3		5	52		
Helper	45	Canada	England	m	6	6	4		7	52		
Machinist	30	U. S.	U. S.	m	2	2			3	52		
"	20	"	"	m	2	2			1	52		
Foreman	43	"	"	m	3	2	1		3	49	3	sickness
Laborer	31	Canada	Canada	m					1	50	2	sick
Machinist	30	U. S.	U. S.	m	3	3	1		4	50	2	"
Laborer	29	Germany	Germany	m	3	3	1		4	52		
"	37	"	"	m	3	3	1		4	52		
Machinist	43	"	"	m	3	3	2		4	52		
"	27	U. S.	U. S.	m	1	1			2	49	3	sick
Engineer	58	"	Canada	m	7	3			4	47	5	"
Machinist	38	Germany	Germany	m	4	4	1		5	49	3	"
"	49	U. S.	U. S.	m	1	1	1		2	50	2	accident
"	36	"	Canada	m	4	4	2		5	52		
"	40	Germany	Germany	m	4	4	3		5	52		
Engineer	27	U. S.	U. S.	m	1	1			2	52		
Machinist	41	Germany	Germany	m	2	2		1	4	50	2	sick
Helper	53	England	England	m	4	1			2	52		
Machinist	36	"	"	m	5	5	3		6	52		
"	42	U. S.	U. S.	m	1	1			2	50	2	out of work
"	31	"	Canada	m	1	1			2	50	2	sick
"	58	"	U. S.	m	1			1	2	48	4	"
"	36	England	England	m	6	6	4		7	42	10	sick and laid off
"	42	Canada	Ireland	m	3	3	3		4	52		

of the Employes Canvassed in Bay City.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am t.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness.			
\$12 50	\$702 00		\$702 00	\$800	\$1000	\$200	\$100				\$1000	1	\$4 00			\$1400
12 50	594 00		594 00	800					\$12 50		3500					850
16 50	865 00		865 00	800					6 50						500	
12 50	702 00	\$102	804 00	700	1500			\$100			2000			24	4500	
15 00	780 00		780 00	750	1000	800					2000				1000	
12 00	624 00		624 00	624					10 00						600	
12 00	600 00		600 00	600					4 50						500	
19 50	1014 00		1014 00	900					8 00						1200	
19 50	1014 00	84	1098 00	800	2000		200				2000	1	4 00	22	8000	
18 50	702 00		702 00	650	800									46	1400	
8 25	429 00	25	454 00	800	1800		125							20	\$50	
9 00	468 00		468 00	450					5 00					14		2200
13 50	638 50		638 50	625	500	125	60				2000			12		350
7 50	390 00		390 00	390					4 50					20		900
10 50	546 00		546 00	540					5 50					10		875
9 00	468 00		468 00	460					7 00					19	60	450
15 00	785 00		785 00	685	500		100					1	4 00	9	30	500
9 00	468 00		468 00	450	1000	25								7	40	800
12 00	624 00		624 00	620	300	50						1	4 00	30		1400
19 50	1014 00		1014 00	750				200	12 00					8	25	700
13 85	720 20	120	840 20	600				240	5 00					13	100	1200
17 30	899 60		899 60	599				300	7 00		8000					800
20 77	1080 04		1080 04	800				200	17 00							500
19 20	998 40		998 40	750	2500	2300	200				2000					900
13 50	702 00		702 00	675					7 00		1000			15	50	900
15 00	780 00	40	820 00	700	1500			100				1	4 00			800
9 00	468 00	200	668 00	650	800						2000	1	4 00	13	500	8000
13 50	702 00		702 00	675	700						1000			22	80	1600
7 50	390 00		390 00	390					6 00							1200
19 00	981 00		981 00	581	2000	400		350			2000					200
7 50	375 00		375 00	370					5 00							3000
15 00	750 00		750 00	690				80	8 00		1000	1	4 00	8	75	300
7 50	390 00		390 00	380					10 00					9	50	500
7 50	390 00		390 00	400	700									5	350	400
12 00	624 00		624 00	624					8 00					8	50	400
14 20	695 20		695 20	695	600	250										750
10 50	493 50	300	793 50	698	1500		100									2200
15 00	735 00		735 00	700	500											900
8 50	425 00		425 00	425					4 00					8	40	500
8 50	442 00		442 00	442					8 00							350
18 50	702 00		702 00	625	950	325	70							11	250	1000
13 00	678 00		678 00	678					8 00			1	4 00			400
18 75	687 50		687 50	687	1500									7	8000	3000
7 50	390 00	180	570 00	560	2000						2000			10	2500	8000
14 80	769 60		769 60	700					10 40					1	70	200
7 50	375 00		375 00	400					5 00							350
12 00	600 00		600 00	600					4 25		1000	1	4 00			300
13 50	648 00		648 00	600	1000						2000					1800
14 25	598 50		598 50	598					8 00		2000	1	4 00	10	25	650
15 00	780 00		780 00	680	1500	500	100				3000	1	4 00	10	100	2500

TABLE NO. 6.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machinist	31	U. S.	U. S.	m	2	2	1		1	51	1	laid off
"	37	"	"	m	2	2	1		2	52		
"	33	"	Ireland	m	2	2	2		3	50	2	sick
"	44	Scotland	Scotland	m	2	2	2		1	52		
"	38	Canada	Canada	m	2	2			4	52		
"	28	U. S.	Scotland	m	2	2			3	52		
"	36	"	U. S.	m	4	4	2		5	52		
"	32	Germany	Germany	m	2	2	1		3	52		
"	50	U. S.	U. S.	m	2	7	3		3	52		
Carpenter	42	"	"	m	2	2	2		3	52		
Galvaniser	26	"	"	m	1	1			2	52		
"	50	France	France	m	4	1			2	40	12	out of work
"	25	England	England	m	1	1			2	52		
Helper	38	Germany	Germany	m	3	3			4	52		
Carpenter	36	"	"	m	3	3	1		4	52		
"	42	"	"	m	4	4	2		5	52		
Painter	43	"	"	m	6	6	4		7	52		
Helper	29	U. S.	"	m	2	2			3	52		
Carpenter	48	Germany	"	m	6	6	4		7	52		
Boiler maker	30	Nov. Sco.	Nov. Sco.	m	2	2			3	52		
"	48	Ireland	Ireland	m	2	3	2		4	46	6	laid off
Helper	28	Canada	Canada	m	2	2			3	52		
"	23	"	"	m	2	2			1	46	6	laid off
Boiler maker	39	"	"	m	4	4	2		5	52		
Helper	28	Sweden	Sweden	m	2	2			3	52		
Carpenter	32	Germany	Germany	m	3	3	1		4	52		
Machinist	41	U. S.	U. S.	m	2	2	1		3	49	3	sick
Blacksmith	26	Ireland	Ireland	wr	1	1	1	1	2	23		
Stenographer	27	U. S.	U. S.	wr				1	1	52		
Blacksmith	59	Canada	Canada	wr						50	2	sick
Machinist	50	U. S.	U. S.	wr				1	1	26	26	sick and no work
"	22	Canada	Canada	s						50	2	sick
"	25	U. S.	England	s						46	6	laid off
Helper	23	"	"	s						52		
Machinist	18	"	Canada	s						48	4	sick
Helper	22	Scotland	Scotland	s						47	5	laid off
Machinist	19	U. S.	U. S.	s						46	6	out of work
"	33	Germany	Germany	s						50	2	sick
"	28	U. S.	"	s						47	5	"
Jib-man	35	"	U. S.	s						52		
Machinist	21	"	Canada	s						46	6	sick and no work
"	24	Germany	Germany	s						50	2	sick
"	29	Canada	Ireland	s						47	5	"
"	25	"	Canada	s						47	5	no work
"	22	U. S.	Norway	s						52		
"	17	Germany	Germany	s						52		
"	20	U. S.	U. S.	s						49	3	sick
"	18	Canada	England	s						49	3	"
"	25	U. S.	U. S.	s						51	1	vacation
Molder	19	"	Holland	s						46	6	laid off
Rivet boy	14	"	U. S.	s						52		
Galvaniser	21	Germany	Germany	s						48	4	sick
Carpenter	19	"	"	s						52		

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$785 00		\$785 00	\$800				\$80	\$8 00			1	\$4 00			\$450
7 50	390 00		390 00	400					5 00							200
13 50	675 00		675 00	670					8 00		\$2000	1	4 00			800
13 00	750 00		750 00	780 00				100	9 00		2000	1	4 00	11	\$200	800
7 50	390 00		390 00	450					4 50					19		300
14 00	728 00	\$15	743 00	700					8 00							475
15 75	619 00		619 00	750					10 00			1	4 00			700
9 00	468 00		468 00	475				50	4 00					9		350
7 50	390 00	250	640 00	640					6 00							500
15 00	780 00		780 00	700	\$1600		\$50				1000					2400
12 00	624 00	25	649 00	600	1500						2000			4		3000
7 50	390 00	150	450 00	450					4 00					23	50	300
19 50	1014 00		1014 00	750	600	\$150	100				2000			7		1200
7 50	390 00		390 00	400	350									18	60	500
12 00	624 00		624 00	600					6 00					18	30	600
12 00	624 00	95	719 00	600	1000	300	50		4 00					32		1200
7 50	390 00	180	570 00	570					4 00					6	100	400
9 50	494 00		494 00	494					4 00							300
12 00	624 00	85	709 00	700	1000	600					3000	1	4 00	21	65	1400
18 00	936 00		936 00	700	1500		200							10	50	3000
13 50	621 00		621 00	600					8 00					11	350	400
8 50	442 00		442 00	442					6 00		2000			14		300
8 50	391 00		391 00	400					4 00					8		300
12 00	624 00		624 00	600	1000	250			6 00					29		1200
7 50	390 00		390 00	390	750	400								20		800
15 00	780 00		780 00	675				100	6 00			1	4 00	30		650
18 00	882 00		882 00	882				200	12 00		5000					1200
12 00	624 00		624 00	620					5 00					7		380
15 00	780 00		780 00	750					7 00							500
10 80	540 00		540 00					60		\$2 50				7	70	800
13 50	351 00		351 00							3 50						200
13 50	675 00		675 00	575				100	7 50		3000			21		500
10 50	453 00		453 00					75		4 00						200
7 50	390 00		390 00					60		4 00	2000					150
7 50	390 00		390 00						4 00			1	4 00			
7 50	352 50		352 50					25	4 00					13		50
6 00	276 00		276 00					*	*							
9 00	450 00		450 00					100	3 50					8	100	500
13 50	634 50		634 50						4 00							250
8 50	442 00		442 00					50	3 50	1000	1	4 00				400
13 50	621 00		621 00					150	3 50							250
9 00	450 00		450 00					150	4 00					7	20	400
12 75	599 25		599 25						4 00					11	50	350
12 00	564 00		564 00						4 00					1	25	35
5 00	260 00		260 00						3 50							
4 50	234 00		234 00						2 00							
13 50	661 50		661 50						3 50							
10 50	514 50		514 50					200	8 80							280
13 50	688 50		688 50						8 50			1	4 00			200
7 50	345 00		345 00					*	*			1	4 00			
4 50	234 00		234 00					*	*							
7 50	390 00		390 00						8 00					7		
10 50	546 00		546 00					50	3 50							100

* Lives at home and gives wages to parents.

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Carpenter	20	Canada	Scotland	s	—	—	—	—	—	46	6	laid off
Helper	23	Germany	Germany	s	—	—	—	—	—	48	4	sick
Boiler maker	19	U. S.	Ireland	s	—	—	—	—	—	46	6	laid off
Helper	23	Canada	"	s	—	—	—	—	—	47	5	first work in U. S.
"	34	"	Canada	s	—	—	—	—	—	40	—	laid off
"	22	"	"	s	—	—	—	—	—	44	8	laid off
Boiler maker	17	"	"	s	—	—	—	—	—	52	—	laid off
"	29	"	"	s	—	—	—	—	—	46	6	laid off
"	17	U. S.	England	s	—	—	—	—	—	40	12	sickness and vacat'n
Draftsman	23	"	U. S.	s	—	—	—	—	—	52	—	—
Office boy	16	"	Canada	s	—	—	—	—	—	26	26	school
Blacksmith	22	"	U. S.	s	—	—	—	—	—	48	4	sick
Helper	17	England	England	s	—	—	—	—	—	50	2	laid off
Blacksmith	22	"	"	s	—	—	—	—	—	47	5	laid off
"	22	Germany	Germany	s	—	—	—	—	—	49	4	"
"	18	U. S.	Canada	s	—	—	—	—	—	49	3	"
Helper	22	Scotland	Scotland	s	—	—	—	—	—	50	2	sick
Blacksmith	32	Canada	Canada	s	—	—	—	—	—	50	2	laid off
Helper	19	U. S.	U. S.	s	—	—	—	—	—	47	5	laid off
Blacksmith	19	"	"	s	—	—	—	—	—	52	—	—
Blacksmith	23	Canada	England	s	—	—	—	—	—	46	6	sick and laid off
Helper	19	Germany	Germany	s	—	—	—	—	—	52	—	—
Molder	17	U. S.	Ireland	s	—	—	—	—	—	52	—	—
"	22	Nova Sco'a	Nova Sco'a	s	—	—	—	—	—	42	10	laid off
"	17	U. S.	Ireland	s	—	—	—	—	—	52	—	—
Helper	20	Canada	Germany	s	—	—	—	—	—	44	8	sick and laid off
Molder	23	U. S.	"	s	—	—	—	—	—	45	7	"
Cupola tender	30	Sweden	Sweden	s	—	—	—	—	—	44	8	laid off
Molder	30	Canada	Scotland	s	—	—	—	—	—	42	10	laid off
McKINNON M'FG. Co.												
Helper	29	Holland	Holland	m	2	2	—	—	2	51	1	sick
Boiler maker	34	Scotland	Scotland	m	4	3	—	—	4	52	—	—
"	36	U. S.	England	m	3	3	2	—	4	49	3	sick
Helper	42	Ireland	Ireland	m	6	5	3	—	6	52	—	—
Boiler maker	52	U. S.	Canada	m	4	2	1	—	3	50	2	sick
"	47	Canada	Germany	m	5	3	3	—	4	49	3	"
"	28	Germany	"	m	2	2	—	—	3	52	—	—
"	30	U. S.	Scotland	m	3	3	1	1	5	52	—	—
Blacksmith	45	Holland	Holland	m	5	5	3	—	6	52	—	—
Pattern maker	49	Canada	Canada	m	4	4	4	2	7	52	—	—
Machinist	52	U. S.	U. S.	m	2	2	2	—	3	49	3	sick
Cupola tender	28	Canada	Canada	m	3	3	1	—	4	52	—	—
Molder	33	Ireland	Ireland	m	4	4	2	—	5	52	—	—
"	31	U. S.	Canada	m	2	2	2	—	3	52	—	—
"	35	Canada	"	m	3	3	2	—	4	52	—	—
Machinist	40	Germany	Germany	m	4	4	2	—	5	44	8	sick
Engineer	49	U. S.	U. S.	m	3	3	3	—	4	50	2	"
Machinist	31	"	"	m	2	2	2	—	3	52	—	—
Superintendent	52	"	"	m	2	2	2	—	3	52	—	—
Boiler maker	25	"	England	m	1	1	—	—	1	50	2	sick
"	36	Switz.	Switz.	m	3	3	2	—	4	48	4	"

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, amt. of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 50	\$438 00		\$438 00							\$2 50						\$40
9 50	456 00		456 00							2 00						60
7 50	345 00		345 00					* 25		2 00						85
9 00	423 00		423 00							2 00						
8 50	340 00		340 00													
8 28	363 00		363 00							†						
8 25	429 00		429 00							3 50						75
6 00	276 00		276 00					*		*						
9 00	360 00		360 00							4 00						300
4 50	234 00		234 00					*								
9 00	468 00		468 00					109		4 50						200
6 00	156 00		156 00					*		2 00						100
7 50	360 00		360 00							3 00						
6 00	300 00		300 00							4 00						
10 80	507 60		507 60					60				1	\$4 00	14	†	70
12 00	576 00		576 00							3 50	\$1000			6		70
7 50	367 50		367 50							3 50						
7 50	375 00		375 00							2 50				10		50
9 00	450 00		450 00					200		3 50				8		500
8 22	356 34		356 34							3 50						
6 00	312 00		312 00					*		3 50						
7 50	345 00		345 00					50		2 00						
7 50	360 00		360 00							3 00		1	4 00	13		300
5 10	265 20		265 20							†				9		100
13 50	567 00		567 00													100
6 00	312 00		312 00					*		*						
7 50	330 00		330 00					25		3 00						85
10 50	472 50		472 50					100		4 00		1	4 00			250
12 00	528 00		528 00							4 00				11		300
13 50	567 00		567 00							3 50				12		300
9 00	459 00		459 00	\$450					\$8 00			1	5 00	13		500
15 00	780 00		780 00	740	\$1000	\$100		\$40			1000			18	25	1100
13 50	661 50		661 50	650	800	200										1200
9 00	468 00	\$250	728 00	680					9 00					35		650
15 00	750 00		750 00	700					10 00							600
15 00	735 00		735 00	650												
15 00	780 00		780 00	600	900	150	150		8 00					32		700
16 50	858 00		858 00	750										16		1200
15 00	780 00	200	980 00	700	1200	200			11 00					27		600
18 50	702 00		702 00	700	2000						1000			22	150	2000
15 00	735 00		735 00	680				50	10 00		2000					3000
9 00	468 00		468 00	480					6 00					9		700
18 50	702 00		702 00	650					7 00					30		1300
15 00	780 00		780 00	650	900		100									1800
18 00	936 00		936 00	725	1000			200						15		1800
12 00	528 00		528 00	575	900									10	100	1800
18 00	900 00		900 00	750	8000			140			3200					4000
15 00	780 00		780 00	680	1000	200	100				2000					1700
23 08	1200 00		1280 00	850				250	13 00		2500					3000
12 00	600 00	80	600 00	600					7 00							400
15 00	720 00		720 00	700					10 00		1000			11	100	750

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Helper	44	Holland	Holland	m	6	2	2		3	52		
Boiler maker	33	U. S.	Canada	m	6	1	1	1	3	52		
Helper	37	Ireland	Ireland	m	3	2			3	50	2	sick
Boiler maker	40	Germany	Germany	m	4	4	3		5	52		
	33	England	England	m	4	4	2		5	51	1	vacation
"	40	U. S.	Ireland	m	5	2	2		3	48	4	sickness
Helper	51	Ireland	"	m	6	1	1		2	49	3	sick
	48	Germany	Germany	m	5	3	2		4	50	2	"
Boiler maker	37	U. S.	Holland	m	4	3	2		4	49	3	"
Pattern maker	75	England	England	wt	4			1	1	26	26	sickness
Boiler maker	41	U. S.	Scotland	wt	2	2	1		2	50	2	sick
	55	Holland	Holland	wt	4			1	1	47	5	sickness
Helper	22	Sweden	Sweden	s						47	5	sick
Rivet boy	17	U. S.	Ireland	s						53		
Helper	19	Canada	Canada	s						48	4	sick
Blacksmith	21	U. S.	Holland	s						47	5	"
Fireman	19	Germany	Germany	s						52		
Molder	19	U. S.	England	s						52		
	36	Ireland	Ireland	s						50	2	sick
Helper	20	U. S.	U. S.	s						52		
Machinist	19	"	"	s						52		
"	19	"	Scotland	s						48	4	sick
"	21	England	England	s						53		
	23	Canada	Canada	s						47	5	sick
Book-keeper	19	U. S.	Scotland	s						52		
Helper	23	Germany	Germany	s						52		
Boiler maker	21	Canada	England	s						50	2	sick
Rivet boy	16	Germany	Germany	s						48	4	"
Helper	59	"	"	s						48	4	laid off
	22	Sweden	Sweden	s						48	4	sick
Rivet boy	17	U. S.	Germany	s						49	3	"
SMALLEY BROS. & Co.												
Machinist	51	Holland	Holland	m	5	2	2		3	48	4	"
"	24	U. S.	U. S.	m					1	50	2	vacation
"	23	"	"	m	1	1		1	3	50	2	sickness
	33	Canada	Scotland	m	2	2	2		3	52		
Foreman	28	England	England	m	2	2	1		3	52		
Machinist	26	Canada	Canada	m	1	1			2	49	3	laid off
"	38	U. S.	U. S.	m	2	2	2		3	48	4	"
"	40	"	"	m	2	2	1		3	48	4	"
"	28	"	"	m	1	1	1		2	50	2	sick
"	23	"	"	m					1	52		
Helper	45	Canada	Canada	m	7	4	3		5	52		
Foreman	46	Scotland	Scotland	m	5	5	3		6	52		
Machinist	28	England	England	m	1	1			2	44	8	sick and laid off
	26	"	"	m	1	1			2	49	3	sickness
Pattern maker	31	Canada	"	m	2	2			3	52		
Book-keeper	34	Ireland	Ireland	m	2	2			3	52		
Machinist	32	U. S.	Canada	m	2	2	1		3	52		
Molder	38	"	Scotland	m	2	2	1		3	52		
Core maker	28	Canada	England	m	2	2			3	52		
Cupola tender	37	Germany	Germany	m	2	2	1		3	50	2	sick

TABLE No. 6—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 00	\$546 00	-----	\$546 00	\$540 00					\$7 00	-----				17	\$50	\$500
13 50	702 00	-----	702 00	700 00	\$1200	-----				-----	\$1000					1800
9 00	450 00	-----	450 00	500 00		-----			6 00	-----				18	50	550
9 00	468 00	\$200	668 00	650 00		-----			8 00	-----		1	\$5 00	19		600
15 00	765 00	-----	765 00	750 00	1500	-----				-----	2000			22		2500
13 50	648 00	-----	648 00	720 00	1000	\$200	-----			-----						1500
9 00	441 00	-----	441 00	400 00		-----			6 00	-----				31	80	500
9 00	450 00	-----	450 00	450 00		-----			9 00	-----				22	50	700
15 00	785 00	-----	785 00	835 00	1000		\$50			-----	1000	1	5 00			1700
12 00	312 00	-----	312 00	600 00	800	200				-----		1	5 00	45		1000
13 50	675 00	-----	675 00	700 00	1500	-----				-----	1000					2200
15 00	706 00	-----	706 00	705 00	1000	-----				-----				29	150	1600
7 50	352 50	-----	352 50	352 50		-----		\$40		\$3 50				12		60
5 00	260 00	-----	260 00			-----				*						
7 50	369 00	-----	360 00			-----				3 50						
7 50	352 50	-----	352 50			-----		50		4 00						100
4 00	206 00	-----	206 00			-----		30		2 75						50
6 00	812 00	-----	812 00			-----		50		3 75						60
18 50	675 00	-----	675 00			-----		350		3 50				35		1000
7 50	390 00	-----	390 00			-----		150		2 50						250
13 50	702 00	-----	702 00			-----		800		4 80						400
6 00	288 00	-----	288 00			-----		200		free						250
6 00	312 00	-----	312 00			-----		180		3 50				18		370
9 00	428 00	-----	423 00			-----		75		4 00				9		175
10 00	520 00	-----	520 00			-----		150		4 00						800
9 00	468 00	-----	468 00			-----		200		3 50				12		400
7 50	375 00	-----	375 00			-----		100		3 00				16		150
4 50	216 00	-----	216 00			-----		*		*						
10 50	504 00	-----	504 00			-----				4 00				7		
7 50	360 00	-----	360 00			-----				4 00				16		25
4 50	220 50	-----	220 50			-----		*		*						
15 00	720 00	-----	720 00	700 00	1000	200	20			-----				17	150	1300
13 50	675 00	-----	675 00	595 00	900	100	80			-----	2000	1	22 00			1800
14 20	710 00	-----	710 00	700 00		-----			8 50	-----	3500	1	10 00			500
14 20	738 40	-----	738 40	780 00		-----			5 00	-----		1	25 00	20		450
18 00	986 00	-----	986 00			-----			7 00	-----	2000			7		600
15 00	785 00	-----	785 00	700 00	900	-----				-----	2000			20		1500
13 50	648 00	-----	648 00	598 00	1000		50			-----	3000	1	10 00			1500
7 50	360 00	-----	360 00			-----			5 00	-----						350
13 50	675 00	-----	675 00	670 00	1200	450				-----	2000					1200
13 50	702 00	-----	702 00	500 00		-----		200		12 00	2000					700
9 00	468 00	-----	468 00	450 00		-----			8 00	-----				11		400
22 00	1144 00	-----	1144 00	820 00	1800	-----	300			-----	2000			23	100	800*
15 00	680 00	-----	660 00	650 00		-----			8 00	-----		1	15 00	8		500
13 50	661 50	-----	661 50	661 00	1400	200				-----	2000			23		2200
13 00	676 00	100	776 00	600 00	800	-----		175		-----				8	200	3000
18 00	998 00	60	998 00	690 00	1200	-----	300			-----		1	25 00	15		1600
15 00	730 00	-----	790 00	700 00		-----	80			-----	1000					1200
13 50	702 00	150	852 00	550 00	1400	-----		300		-----	2500					1800
9 35	512 20	-----	512 20	500 00		-----			5 00	-----				9		350
13 50	675 00	-----	675 00	600 00	500	800	50			-----	2000			27		500

* Lives at home and gives wages to parents.

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Pattern maker	47	U. S.	U. S.	m	4				1	52		
Helper	39	Holland	Holland	m	4	4			5	52		
Molder	35	U. S.	Ireland	m	4	2	1		3	52		
	40	Canada	Canada	m	4	4	4		5	50	2	sick
Machinist	41	Germany	Germany	m	4	4	3		5	50	2	sick
Molder	41	U. S.	U. S.	m	1	1	1		2	52		
Blacksmith	28	U. S.	England	s				1	1	52		
Helper	22	Ireland	Ireland	s						48	4	sick
Machinist	17	U. S.	England	s						52		
"	17	"	U. S.	s						50	2	sick
Helper	26	Canada	Canada	s						47	5	"
Machinist	18	U. S.	U. S.	s						52		
"	21	"	"	s						52		
"	26	Canada	Canada	s						48	4	laid off
"	20	Scotland	Scotland	s						52		
Teamster	31	Canada	Canada	s						52		
Pattern maker	18	U. S.	U. S.	s						52		
Molder	23	"	"	s						52		
"	24	Canada	Scotland	s						52		
Laborer	19	U. S.	U. S.	s						52		
Molder	35	"	"	s						49	3	sick
BAY CITY BUGGY WORKS.												
Trimmer	48	Canada	England	m	4	2	2		3	49	3	"
Painter	28	Germany	Germany	m	2	2			3	52		
"	25	U. S.	Canada	m	1	1			2	50	2	sick
"	29	"	"	m	1	1			1	52		
"	32	"	U. S.	m	1	1	1		2	40	12	sick and laid off
Blacksmith	24	Canada	France	m					1	52		
"	35	Germany	Germany	m	2	2	1		3	52		
Helper	49	Ireland	Ireland	m	5	2	2		3	50	2	sick
Wood worker	34	U. S.	England	m	2	2	1		3	47	5	sick and laid off
Finisher	42	Denmark	Denmark	m	5	4	3		5	49	3	sick
Laborer	45	Germany	Germany	m	5	1	1		2	52		
Helper	50	U. S.	"	m	6	2	2		3	51	1	sick
Wood worker	45	"	Canada	m	3	2	2		3	46	6	laid off and sick
"	37	England	England	m	4	4	4		5	52		
"	33	U. S.	U. S.	m	3	3	2		4	52		
Superintendent	30	Canada	England	m	2	2	1		3	48	4	shops closed
Blacksmith	40	"	Canada	wr	2	2	2		2	52		
Book-keeper	25	U. S.	U. S.	s						52		
Wood worker	21	Canada	England	s						52		
"	30	U. S.	U. S.	s						49	3	vacation
"	14	"	"	s						52		
"	25	"	"	s						49	3	laid off
Helper	19	"	Germany	s						49	3	sick
"	18	"	Canada	s						52		
Finisher	23	"	Ireland	s						52		
Blacksmith	15	"	Canada	s						52		
"	17	Canada	England	s						50	2	sick
Painter	40	U. S.	U. S.	s						50	2	"
"	19	"	Canada	s						39		first work
"	16	Canada	"	s						49	3	sick

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			In foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$780 00		\$780 00	\$700					\$13 00		\$2000					\$350
9 00	468 00		468 00	460					4 00					8	\$75	400
13 50	702 00		702 00	700					7 00		1000	1	\$5 00			550
13 50	675 00		675 00	650	\$900	\$100								13	50	600
15 00	750 00		750 00	700	800			\$50						13	150	1300
21 00	1092 00	\$450	1542 00	800				700	13 00		4000					6500
10 50	546 00		546 00	540					†							
7 50	360 00		360 00					150		\$4 00				14		350
7 50	390 00		390 00					100		4 00						200
6 00	300 00		300 00					*		*						
9 00	423 00		423 00					200		4 00	1000			9		650
4 50	234 00		234 00							3 50	1000	1	5 00			100
6 00	312 00		312 00							3 00	1500	1	10 00			1000
15 00	720 00		720 00					200		4 00				18		
7 50	360 00		360 00					200		1 50						250
7 50	390 00		390 00					75		3 00				21		250
4 50	234 00		234 00					*								
13 50	702 00		702 00							3 50						
15 00	780 00		780 00							5 00		1	5 00	17		150
9 00	468 00		468 00					100		3 00						120
13 50	661 50		661 50					300		4 00						1100
15 00	735 00		735 00	730	1000									18	60	1600
13 50	702 00		702 00	650	900	300	\$50							16		1000
13 50	675 00		675 00	675					7 00							400
12 00	624 00		624 00	600	800	200										1000
12 00	480 00		480 00	600					7 00							450
23 00	1196 00		1196 00	1100	3000			50						12		4200
13 50	702 00		702 00	680					7 60					13		500
9 00	450 00		450 00						6 00					13	100	600
15 00	705 00		705 00	605	900	200	100									1300
15 00	735 00		735 00	735	900									17	40	1200
9 00	468 00		468 00	460					8 00					17	45	450
9 00	459 00		459 00	459					8 00			1	5 00			650
15 00	680 00		680 00	600	1000	300	75				2000					1300
13 50	702 00		702 00	700					12 00		1000			18	65	800
15 00	780 00		780 00	720	800			40								1300
18 00	864 00		864 00	700	800	200	150				1000			16		1400
13 50	702 00		702 00					50		8 50				11	100	900
8 00	416 00		416 00					150		4 00						550
12 00	624 00		624 00					200		4 00				7		300
14 00	696 00		696 00					350		4 00						1100
4 50	234 00		234 00					*		*						
13 50	661 50		661 50					350		4 00						600
10 50	514 50		514 50					175		5 00						250
6 00	312 00		312 00					*		*						
10 50	546 00		546 00					*		*						
6 00	312 00		312 00					*		*						
7 50	375 00		375 00					*		*						
18 00	900 00		900 00					405		5 50	4000					1800
6 00	234 00		234 00					*		*						
3 50	171 50		171 50					*		*						

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Painter	18	U. S.	Germany	s	—	—	—	—	—	48	4	sick
"	16	"	Canada	s	—	—	—	—	—	42	—	first work
"	15	"	U. S.	s	—	—	—	—	—	52	—	—
Trimmer	27	"	—	s	—	—	—	—	—	48	4	no work
"	17	"	Canada	s	—	—	—	—	—	47	5	"
BAY CITY IRON CO.												
Core maker	34	"	England	m	3	3	2	—	4	44	8	sick
Molder	39	"	Germany	m	4	4	2	—	5	52	—	—
"	40	"	Canada	m	7	7	5	—	8	52	—	—
Cupola tender.	44	"	—	m	3	2	2	—	3	49	3	sick
Molder	46	England	England	wr	1	1	1	—	1	50	2	"
"	42	Bohemia	Bohemia	m	3	3	3	—	4	49	3	"
Pattern maker	73	U. S.	U. S.	m	6	2	—	—	3	48	4	"
"	33	"	Ireland	m	3	3	1	—	4	52	—	—
Machinist	25	"	U. S.	m	—	—	—	—	1	48	4	sick
"	29	"	Canada	m	—	—	—	—	1	50	2	"
"	43	Canada	U. S.	m	8	6	4	—	7	52	—	—
"	40	U. S.	—	m	2	2	—	—	3	51	1	sick
"	41	Canada	Canada	m	6	6	5	—	7	50	2	"
"	25	England	England	m	1	1	—	—	2	52	—	—
"	36	Canada	Canada	m	—	—	—	—	1	49	3	sick
Blacksmith	37	U. S.	U. S.	m	2	2	2	—	3	50	2	"
"	28	Canada	Canada	m	1	1	—	—	2	52	—	—
Helper	21	U. S.	Scotland	s	—	—	—	2	2	52	—	—
Book-keeper	20	England	England	s	—	—	—	—	—	13	39	school
Blacksmith	34	U. S.	Germany	s	—	—	—	—	—	52	—	—
"	38	"	U. S.	s	—	—	—	—	—	49	3	sick
Machinist	19	"	Canada	s	—	—	—	—	—	50	2	"
"	18	"	Germany	s	—	—	—	—	—	48	4	"
"	17	"	Canada	s	—	—	—	—	—	52	—	—
Molder	19	"	England	s	—	—	—	—	—	52	—	—
Pattern maker	22	"	Ireland	s	—	—	—	—	—	48	4	sick
Molder	23	"	Canada	s	—	—	—	—	—	48	4	"
"	28	"	Switz.	s	—	—	—	—	—	52	—	—
"	21	"	Ireland	s	—	—	—	—	—	48	4	sick
"	18	"	U. S.	s	—	—	—	—	—	52	—	—
"	21	"	—	s	—	—	—	—	—	49	3	sick
"	24	"	Canada	s	—	—	—	—	—	52	—	—
Helper	20	Canada	"	s	—	—	—	—	—	50	2	sick
M. GARLAND.												
Machinist	50	Scotland	Scotland	m	4	1	—	—	2	48	4	"
"	32	"	—	m	1	1	—	—	2	46	6	sickness & accident
Carpenter	48	U. S.	U. S.	m	4	4	4	—	5	52	—	—
"	31	Germany	Germany	m	—	—	—	—	1	47	5	laid off
Machinist	38	U. S.	U. S.	m	1	1	1	—	2	52	—	—
Helper	44	"	Germany	m	5	4	2	—	5	52	—	—
Blacksmith	32	"	U. S.	m	3	3	1	—	4	52	—	—
Helper	44	"	—	m	4	4	2	—	5	52	—	—
Machinist	28	"	"	m	—	—	—	—	1	52	—	—
"	46	Canada	Canada	m	6	5	2	—	6	50	2	sickness
"	29	"	U. S.	m	2	2	—	—	3	48	4	"

TABLE No. 6.—CONTINUED.—Showing Individual Reports.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$6 00	\$288 00		\$288 00							\$5 00						
2 50	105 00		105 00							* * *						
3 00	156 00		156 00													
10 50	504 00		504 00					\$200		4 00						\$600
6 00	282 00		282 00							3 50						
12 00	528 00		528 00	\$900					\$8 00							500
13 50	702 00		702 00	650	\$1000	\$50	\$50				\$2500					1800
13 50	702 00		702 00	700					6 00							500
12 00	588 00		588 00	590					8 00							850
13 50	675 00		675 00						5 50	1000				10	\$60	650
22 50	1102 50		1102 50	700	3000	350	300	100			2000			22		4300
10 50	504 00		504 00	500	1200	500										1200
19 50	1014 00		1014 00	700	2200	500	300				2000	1	\$10 00			2700
15 00	720 00		720 00					100		8 00						2000
15 00	750 00	\$180	930 00	580				175	10 00		6000					3200
16 00	832 00		832 00	750				80	8 00							1200
15 00	785 00		785 00	685	1000		100				2000	1	10 00	11	50	1600
15 00	750 00		750 00	750					8 00		2000			19		750
9 00	468 00		468 00	450					7 00					13		450
14 25	698 25		698 25	675					6 00					12	50	550
13 50	675 00		675 00	650					10 00							600
18 00	936 00		936 00	680	1300	500	250							27		1800
9 00	468 00		468 00	460					10 00							900
9 00	117 00		117 00							4 00						
9 00	468 00		468 00					150		3 50						500
9 00	441 00		441 00					180		8 50						650
7 50	375 00		375 00					70		2 00						110
6 00	288 00		288 00					* 50		2 00						
4 50	234 00		234 00													
13 50	702 00		702 00					350		3 50		1	5 00			560
4 50	216 00		216 00							3 00						
15 00	720 00		720 00					300		3 50		1	5 00			560
15 00	780 00		780 00					300		3 50						900
13 50	648 00		648 00					300		3 50	1000					400
4 50	234 00		234 00													
12 00	588 00		588 00					150		3 50						250
7 50	390 00		390 00					* 60		3 50						170
9 00	450 00		450 00							* 50						
15 00	720 00		720 00	650	800									16	100	1200
15 00	690 00		690 00	630	800	550	60				1000			27		1800
15 00	780 00		780 00	700					8 00	750						350
18 50	634 50		634 50	700	900											1400
13 50	702 00		702 00	675					9 00		2000			14		650
9 00	468 00	272	740 00	740	1500	875										2300
15 00	780 00	180	960 00	800					7 50		2000					2600
9 00	468 00		468 00						3 50							
14 10	733 20		733 20	700					8 00		1500					700
10 50	525 00	150	675 00	650					7 50					21		650
16 50	792 00		792 00	780					10 00		500			9		500

* Lives at home and gives wages to parents.

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Engineer	57	Canada	Canada	m	1				1	48	4	sick
Machinist	28	U. S.	U. S.	m	1				1	50	2	"
Shipping clerk	28	"	"	m	1				1	52		
Machinist	25	"	"	m	1	1			2	49	3	sickness
Fireman	55	Scotland	Scotland	wr	3	1			1	52		
Machinist	22	U. S.	U. S.	s				1	1	52		
"	22	"	Canada	s						47	5	laid off
Helper	23	Germany	Germany	s						49	3	
Pattern maker	28	England	England	s						47	5	vacation
Machinist	20	U. S.	Canada	s						52		
"	21	"	U. S.	s						52		
"	19	"	Germany	s						52		
Foreman	40	"	U. S.	s						52		
Shipping clerk	18	"	"	s						52		
Stenographer	26	"	"	s						52		
Book-keeper	20	"	"	s						52		
Draftsman	24	"	"	s						52		
MARINE IRON CO.												
Machinist	41	"	Canada	m					1	50	2	sick
Blacksmith	29	"	Germany	m	3	3			4	50	2	"
Machinist	23	"	U. S.	m	1				1	44	8	"
Blacksmith	45	England	England	m	11	7	8		8	50	2	
Machinist	38	Canada	Canada	m	3	3	3		4	52		
Engineer	37	Prussia	Prussia	m	3	3	2		4	52		
Machinist	30	U. S.	U. S.	m	2	2	1		3	52		
Book-keeper	21	Canada	Canada	s						52		
Machinist	15	"	England	s						52		
Helper	24	U. S.	U. S.	s						49	3	sick
Blacksmith	21	Canada	England	s						52		
Machinist	18	U. S.	Germany	s						52		
"	25	"	England	s						49	3	sick
"	26	"	Switz.	s						52		
DAUNT & SHARP.												
Painter	27	Canada	Canada	m	1	1			2	52		
"	31	U. S.	England	m	2	2			3	45	4	laid off
Wood worker	34	"	Canada	m	1	1	1		2	52		
"	55	"	U. S.	m	2				1	52		
Blacksmith	32	"	Canada	m	2	2	1		3	48	4	laid off
"	34	Scotland	Scotland	m	1	1	1		2	52		
Trimmer	25	U. S.	England	m	1	1			2	47	5	laid off
"	42	"	U. S.	m	2	2	2		3	50	2	
Blacksmith	29	Canada	Canada	s						39	13	no work
"	23	U. S.	U. S.	s						52		
"	24	Canada	Canada	s						48	4	laid off
Wood worker	22	U. S.	U. S.	s						52		
Book-keeper	32	"	"	s						45	4	sick
Painter	23	Canada	Canada	s						49	3	laid off
"	19	U. S.	Germany	s						52		
"	29	"	Ireland	s						47	5	sick

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$76 00		\$76 00	\$76 00	\$800				\$8 00		\$2000			25	\$50	\$1200
15 00	750 00		750 00	750 00							2000	1	\$20 00			550
17 30	899 80		899 80	899 80	1500	\$800	\$200			\$1 60						3000
13 50	861 50		861 50	861 50							3000			20	200	300
7 50	300 00		390 00	390 00	450	800										1100
13 50	702 00		702 00	702 00	650	1500	500	50								1500
13 50	634 50		634 50	634 50				\$300		4 00						500
9 00	441 00		441 00	441 00						4 00						150
18 00	846 00		846 00	846 00				800		5 00				9	50	1000
6 50	388 00		388 00	388 00						3 00						
7 50	390 00		390 00	390 00				50		3 50						75
6 00	312 00		312 00	312 00						5 00						1000
21 15	1089 80		1089 80	1089 80				100		3 50	5000					
7 50	390 00		390 00	390 00												
10 00	520 00		520 00	520 00				150		5 00						120
20 00	1040 00	\$82	1072 00	1072 00				800		free	2000					2000
14 00	728 00		728 00	728 00				120		5 50						600
15 00	750 00		750 00	750 00	650	900		100								1800
15 00	750 00		750 00	750 00	725				8 00							500
12 50	594 00		594 00	594 00	494			100	6 00		2000					650
16 50	825 00	450	1275 00	825 00	825			450	9 00							1200
13 50	702 00		702 00	702 00	650	700		50			2000			18		1200
14 40	748 80		748 80	748 80	700	900	100	50		15 00	1000			34		1300
18 00	996 00		996 00	996 00						1000						600
6 00	312 00		312 00	312 00						†				11		125
5 00	260 00		260 00	260 00												
6 00	294 00		294 00	294 00						8 50						200
9 00	468 00		468 00	468 00				150		4 00				11		200
5 00	260 00		260 00	260 00				45		3 00						
13 50	661 50		661 50	661 50				900		4 00						700
18 50	702 00		702 00	702 00				175		8 00						400
12 00	624 00		624 00	600					6 00					5		350
12 00	576 00		576 00	560					8 00							400
15 00	750 00		750 00	650	1000			100								1400
13 50	702 00		702 00	702					not ans.							
15 00	720 00		720 00	700	800											1300
13 50	702 00		702 00	600					10 00					18		400
15 00	705 00		705 00	600	900	200	100									1000
15 00	750 00		750 00	650				100	11 00		500					650
9 00	351 00		351 00					75		3 75				18		350
9 00	468 00		468 00					175		3 50						300
12 50	648 00		648 00					400		4 00	1000			12		800
6 00	312 00		312 00													
9 50	408 00		408 00					75		3 50						800
12 00	588 00		588 00					300		3 50	1000			12		700
6 00	312 00		312 00					20		4 00						50
15 00	705 00		705 00					400		4 50						1200

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
NATIONAL BOILER WORKS.												
Boiler maker	54	U. S.	U. S.	m	5	2	2		3	47	5	sick
"	47	Germany	Germany	m	3	3	2	1	5	52		
Helper	35	Holland	Holland	m	3	2	1		3	51	1	sick
"	41	Germany	Germany	m	3	2	2		3	50	2	"
Boiler maker	46	U. S.	Canada	m	4	1	1	1	3	49	3	
"	48	Germany	Germany	m	5	2	1		3	46	6	sick and laid off
"	32	Sweden	Sweden	m	4	4	2		5	48	4	sick
"	44	Canada	Germany	m	2			2	3	52		
"	52	England	England	m	5	2	2		3	48	4	sick
Helper	27	Germany	Germany	m	2	2			3	52		
Boiler maker	46	Holland	Holland	m	4	2	1		3	50	2	sick
"	32	"	"	s				2	2	52		
Rivet boy	16	"	"	s						50	2	vacation
Helper	19	U. S.	England	s						49	3	sick
"	30	Ireland	Ireland	s						46	6	laid off
Rivet boy	16	U. S.	Germany	s						52		
Helper	18	"	"	s						48	4	accident
"	21	Holland	Holland	s						49	3	sick

TABLE No. 6.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning a home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 00	\$705 00	-----	\$705 00	\$705	\$1500	-----	-----	-----	-----	-----	\$2000	-----	-----	-----	-----	\$2200
15 00	780 00	-----	780 00	720	900	-----	\$50	-----	-----	-----	-----	1	\$5 00	20	\$120	1500
9 00	459 00	-----	459 00	450	-----	-----	-----	-----	\$7 00	-----	-----	-----	-----	13	-----	400
9 00	450 00	-----	450 00	475	-----	-----	-----	-----	7 00	-----	-----	-----	-----	8	100	700
13 50	661 50	-----	661 50	675	1200	-----	*	-----	-----	-----	1000	-----	-----	-----	-----	1700
15 00	680 00	\$230	920 00	700	1500	-----	150	\$25	-----	-----	2000	1	5 00	19	150	2400
15 00	720 00	-----	720 00	700	800	-----	-----	-----	-----	-----	-----	-----	-----	7	200	1400
15 00	780 00	-----	780 00	750	1000	-----	-----	-----	-----	-----	-----	-----	-----	19	200	1500
15 00	720 00	-----	720 00	700	1100	\$300	-----	-----	-----	-----	-----	-----	-----	21	200	2500
9 00	468 00	-----	468 00	450	-----	-----	-----	-----	6 00	-----	-----	-----	-----	17	-----	400
12 00	600 00	230	830 00	680	800	-----	150	-----	-----	-----	-----	-----	-----	12	150	1600
15 00	780 00	-----	780 00	675	800	-----	-----	-----	-----	-----	-----	1	5 00	13	-----	1200
4 50	225 00	-----	225 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
7 50	367 50	-----	367 50	-----	-----	-----	-----	60	-----	-----	\$3 50	-----	-----	-----	-----	75
7 50	345 00	-----	345 00	-----	-----	-----	-----	-----	-----	8 50	-----	-----	-----	-----	-----	-----
4 50	234 00	-----	234 00	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----
7 50	360 00	-----	360 00	-----	-----	-----	-----	-----	-----	3 50	-----	-----	-----	-----	-----	-----
7 50	367 50	-----	367 50	-----	-----	-----	-----	50	-----	3 50	-----	-----	-----	4	-----	75

*Lives at home and gives wages to parents.

BAY CITY.

Three hundred and seventy employ  s were canvassed: Marine Iron Co. (manufacturers of engines and general iron work), 14; Daunt & Sharp (manufacturers of carriages and sleighs), 16; National Boiler Works (manufacturers of boilers), 18; M. Garland (manufacturer of saw mill machinery), 28; Bay City Iron Co., 33; Bay City Buggy Co., 35; Smalley Bros. & Co. (manufacturers of steam engines, saw mill, salt mill and flour mill machinery), 41; McKinnon Manufacturing Co. (manufacturers of engines, boilers, mill and steamboat machinery), 52; Industrial Works (manufacturers of steam shovels, pile drivers, cranes, rail saws and transfer tables), 133.

Nationality: Americans, 187; Canadians, 68; Germans, 44; Englishmen, 21; Hollanders, 11; Irishmen, 15; Scotchmen, 12; Swedes, 5; Nova Scotians, 2; French, Bohemian, Prussian, Swiss and Dane, 1 each. 50+per cent are Americans and 50-per cent foreigners. Of the foreigners 37+per cent are Canadians; 24+per cent Germans; 11+per cent Englishmen; 8+per cent Irishmen; 3-per cent Swedes; 1+per cent Nova Scotia; 6+ per cent Scotch; 6+ per cent Hollanders, and less than 1 per cent French, Bohemian, Prussian, Dane and Swiss. Parentage of those born in the United States: American, 94; Canadian, 33; English, 16; German, 17; Irish, 12; Scotch, 8; Holland, 4; Swiss, 2; Norwegian, 1. 50+per cent have American and 50-per cent foreign parents. 206 employ  s are married, 154 single and 10 widowers. 56-per cent are married, 42-per cent single and 2+per cent widowers. There are employed 2 boys 14 years and three 15 years of age. 151 support self only; 5 support others than self by boarding, and 214 support families: Americans, 95; Germans, 30; Scotchmen, 9; Englishmen, 15; Canadians, 36; Irishmen, 12; Swedes, 2; Nova Scotian, 1; Hollanders, 9; Frenchmen, 1; Bohemian, 1; Prussian, 1; Dane, 1; Swiss, 1. In 214 families there are 608 children, of whom 471 are supported. 21 married men have no children: 14 or 66+per cent are Americans; 4 Canadians; 1 Irishman; 1 Scotchman; 1 German. Of the children supported 137 are under 5 years of age; 326 are 5 and under 20, and 8 are over 20. 259 attend school, which is 79+per cent of school age. 241 or 93+per cent attend the public schools; 18 parochial. Number of persons supported in families, 692; by boarding, 9. 20 employ  s support 24 persons besides wife and children. Total number of weeks worked during the year, 18,387; average, 49.7-. 185 men or 50 per cent lost 818 weeks or 15 years and 38 weeks. Cause of lost time: Vacation, 6; sickness and laid off, 9; laid off, 34; accident, 2; no work, 8; sickness and no work, 2; sickness and vacation, 1; at school, 2; shut down, 1; sickness and accident, 2. Total annual earnings, \$212,020.28; average, \$573.02. Total income from other resources, \$5,075, as follows: Family earnings, \$3,115; pensions, \$192; interest, \$232; rent, \$1,326; other sources, \$150. Total annual earnings of Americans, \$106,731.68; average, \$570.75; Germans, \$23,529; average, \$534.75; Scotchmen, \$7,961.50; average, \$663.45; Englishmen, \$13,328.20; average, \$634.67; Swedes, \$2,350.50; average, \$470.10; Nova Scotians, \$1,503; average, \$751.50; Canadians, \$38,190.10; average, \$561.61; Irishmen, \$8,710.50; average, \$580.70; Frenchmen, \$300; average, \$300; Bohemian, \$1,102.50; average, \$1,102.50; Hollanders, \$6,109.50; average, \$555.40; Prussian, \$748.80; average, \$748.80; Dane, \$735; average, \$735; Swiss, \$720; average, \$720. Average weekly wages of married men, \$13.33; single men, \$8.88; all employ  s, \$11.48. Wages paid per week: One employ  , \$2.50; one, \$3; one, \$3.50; one, \$4; thirteen, \$4.50; four, \$5; one, \$5.10; twenty-two, \$6; one, \$6.50; forty-seven, \$7.50; one, \$8; one \$8.22; three, \$8.25; seven, \$8.50; forty-two, \$9; two, \$9.50; one, \$9.85; two \$10; fifteen, \$10.50; two, \$10.80; twenty-eight, \$12; one, \$12.75; twenty-one, \$13; forty-four, \$13.50; one, \$13.75; one, \$13.85; three, \$14; one, \$14.10; three, \$14.20; two, \$14.25; one, \$14.40; one, \$14.80; sixty-one, \$15; one, \$15.75;

one, \$16; four, \$16.50; two, \$17.30; eleven, \$18; one, \$19; five, \$19.50; one, \$19.20; one, \$20; one, \$20.75; two, \$21; one, \$22; one, \$22.50; one, \$23; one, \$23.08.

Total family expenses, \$134,109; per capita, \$148.02: Americans, \$60,691; per capita, \$169.05; Germans, \$17,496; per capita, \$114.35; Scotchmen, \$6,060; per capita, \$151.50; Englishmen, \$10,029; per capita, \$147.49; Swedes, \$1,090; per capita, \$109; Nova Scotians, \$700; per capita, \$175; Canadians, \$22,488; per capita, \$141.42; Irishmen, \$6,915; per capita, \$135.59; Frenchmen, \$450; per capita, \$150; Bohemians, \$700; per capita, \$140; Hollanders, \$5,355; per capita, \$140.92; Prussians, \$700; per capita, \$140; Danes, \$735; per capita, \$122.50; Swiss, \$700; per capita, \$140. Number owning homes, 102: Americans, 40; Germans, 18; Scotchmen, 6; Englishmen, 7; Swedes 2; Nova Scotian, 1; Canadians, 16; Irishmen, 4; Bohemians, 1; Hollanders, 5; Prussian, 1; Dane, 1. 96 married men, 2 single men and 4 widowers own homes. 46+per cent of married men own homes. 39+per cent of home owners are Americans and 61-per cent foreigners. Total value of homes, \$115,950; average, \$1,136.76; Americans, \$48,800; average, \$1,220; Germans, \$17,400; average, \$966.66; Scotchmen, \$5,500; average, \$916.66; Englishmen, \$7,900; average, \$1,128.57; Swedes, \$1,550; average, \$775; Nova Scotian, \$1,500; average, \$1,500; Canadians, \$19,000; average, \$1,187.50; Irishmen, \$4,700; average, \$1,175; Bohemians, \$3,000; average, \$3,000; Hollanders, \$4,800; average, \$960; Prussian, \$900; average, \$900; Dane, \$900; average, \$900. The homes of 45 employes are mortgaged, which is 44+per cent. Value of mortgaged homes, \$49,600; mortgaged for \$14,100, which is 28+per cent of valuation. The homes of 20 Americans are mortgaged for \$7,625; 6 Germans, \$1,975; 3 Scotchmen, \$700; 4 Englishmen, \$850; 1 Swede, \$400; 5 Canadians, \$1,550; 2 Irishmen, \$150; 1 Bohemian, \$350; 2 Hollanders, \$400; 1 Prussian, \$100. During the year 41 employes made payments or improvements upon homes amounting to \$4,735 and 119 men saved \$18,815 in money. Total number of employes who saved, 158, which is 43-per cent. Total savings, including payments and improvements upon homes, \$23,550, which is 11+per cent of total earnings. Total present worth of 311 employes (59 not reporting), \$285,370; average, \$917.58; Americans, 145; total, \$133,765; average, \$922.51; Germans, 39; total, \$34,120; average, \$874.87; Scotchmen, 12; total, \$11,150; average, \$929.16; Englishmen, 19; total, \$20,890; average, \$1,099.47; Swedes, 5; total, \$2,485; average, \$497; Nova Scotians, 2; total, \$2,100; average, \$1,050; Canadians, 60; total, \$51,085; average, \$851.41; Irishmen, 14; total, \$12,350; average, \$882.14; Frenchmen, 1; total, \$300; Bohemian, 1; total, \$4,300; Hollanders, 10; total, \$9,575; average, \$957.50; Prussian, 1; total, \$1,300; Dane, 1; total, \$1,200; Swiss, 1; total, \$750. 1 employe is worth \$6,500. 22 Germans had \$11,380 upon arrival in this country; 6 Scotchmen, \$650; 9 Englishmen, \$3,110; 1 Swede, \$200; 1 Nova Scotian, \$50; 19 Canadians, \$1,430; 3 Irishmen, \$530; 1 Frenchman, \$50; 5 Hollanders, \$575; 1 Dane, \$40; 1 Swiss, \$100. Total present worth of foreigners, \$151,605. Number renting homes, 110: Americans, 53; Germans, 12; Scotchmen, 3; Englishmen, 8; Canadians, 20; Irishmen, 8; Frenchmen, 1; Hollanders, 4; Swiss, 1. 2 renters are single men and 2 widowers. 51+per cent of married men and 30-per cent of total employes rent. Total monthly rent, \$833.75; average, \$7.58. Total annual rent, \$10,005; average, \$90.95. Per cent of rent to earnings, .14+; per cent of rent to expenses, .15+. Total monthly rent of Americans, \$430.25; average, \$8.11; Germans, \$83; average, \$6.92; Scotchmen, \$27; average, \$9; Englishmen, \$73; average, \$9.13; Canadians, \$128.50; average, \$6.41; Irishmen, \$52; average, \$6.50; Frenchman, \$4; average, \$4; Hollanders, \$28; average, \$6.50; Swiss, \$10; average, \$10.

Number of employes boarding, 130, which is 35+per cent of total. 30 live at home and give wages to parents; 3 live at home and pay no stated amount for board; 1 lives at home and supports family. Total weekly board, \$465.75; average, \$3.58; Americans, 73; total, \$266.25; average, \$3.65; Germans, 13; total, \$43.75; average, \$3.37; Scotchmen, 3; total, \$9; average, \$3; Englishmen, 7; total, \$25; average, \$3.57; Swedes, 3; total, \$11.50; average, \$3.83; Canadians, 27; total, \$95.75; average, \$3.55; Irishmen, 3; total, \$11; average, \$3.66; Hollanders, 1; total, \$3.50. 19 employes keep an itemized account of their expenses, which is 5+per cent. 154 own sewing machines, which is 72-per cent of those supporting families. 65 own musical instruments, which is 17+per cent. Number of musical instruments: Pianos, 21; organs, 36; violins, 7; guitars, 6; banjos, 3; flute, 1; horn, 1. Number of employes who take newspapers and magazines, 197: Americans, 102; Germans, 21; Scotchmen, 6; Englishmen, 15; Swede, 1; Nova Scotian, 1; Canadian, 35; Irishmen, 6; Bohemian, 1; Dane, 1; Hollanders, 6; Prussian, 1; Swiss, 1. 53+per cent take newspapers and magazines, of which 52-per cent are Americans. Number taking dailies, 148; religious, 3; labor, 2; scientific, 3; local and other weekly papers, 116; magazines, 7.

Two hundred and fifteen work at hand and 103 at machine work and 52 at both. 4 men or 1+per cent have been injured since engaged as employes. 8 reported that their labor organization had been of financial benefit to them, and 36 no financial benefit.

Other than financially, 42 reported that their labor organization had been of no benefit to them. 93 carry life insurance, amounting to \$178,450; average, \$1,918.81; Americans, 56; total, \$114,950; Germans, 4; total, \$7,000; Scotch, 5; total, \$9,000; Englishmen, 8; total, \$14,000; Nova Scotian, 1; total, \$3,000; Canadians, 14; total, \$22,500; Irishmen, 2; total, \$4,000; Bohemians, 1; total, \$2,000; Prussian, 1, total, \$1,000; Swiss, 1; total, \$1,000. 25+ per cent are insured. 48 belong to benefit societies: Americans, 26; total weekly benefit, \$177; average, \$6.81; Germans, 8; total, \$36; average, \$4.50; Scotchmen, 2; total, \$8; average, \$4; English, 4; total, \$27; average, \$6.75; Canadians, 4; total, \$38; average, \$9.50; Irishmen, 2; total, \$29; average, \$14.50; Hollanders, 2; total, \$10; average, \$5. Total weekly benefit, \$325; average, \$6.77. 13-per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
JACKSON.

TABLE No. 7.—*Showing Individual Reports*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported beside wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
GEO. T. SMITH MIDDINGS PURIFIER CO.												
Wood worker	28	U. S.	U. S.	m	1	1			2	39	13	sick and no work
"	37	"	"	m	3	3	1		4	52		
Pattern maker	55	"	"	m	2	1	1		2	44	8	sick
Wood worker	28	Canada	Germany	m					1	44	8	sick and laid off
"	33	U. S.	U. S.	m					1	48	4	no work
"	24	"	"	m				2	3	44	8	"
"	40	England	England	m					1	49	3	"
"	32	U. S.	U. S.	m	4	4	8		5	48	4	"
"	42	Germany	Germany	m	1	1			2	46	6	"
"	32	U. S.	U. S.	m	2	2			3	39	13	sick & no work
"	46	"	"	m					1	35	17	no work
"	42	"	"	m	1	1			2	46	6	"
"	31	"	"	m					1	39	13	"
Machinist	34	England	England	m	6	6	4		7	46	6	"
Foreman	51	Ireland	Ireland	m	1	1	1		2	52		
Laborer	31	U. S.	U. S.	m					1	48	4	no work
Wood worker	22	"	"	m					1	50	2	sick and no work
"	31	"	"	m	1	1		1	3	39	13	no work
Finisher	45	Ireland	Ireland	m					1	39	12	"
"	24	U. S.	Germany	m					1	39	12	"
Wood worker	35	"	U. S.	m	5	3	3		4	52		
"	34	"	"	m	1	1	1		2	50	2	no work
"	35	Germany	Germany	wr	3	3	1		3	39	13	"
"	46	U. S.	U. S.	m	2	1	1		2	49	3	vacation
"	29	England	England	m	2	2	1		3	52		
"	27	U. S.	U. S.	m	1	1	1		2	52		
"	38	"	"	m					1	39	13	no work
"	44	"	"	m	6	6	5		7	49	3	sick
"	28	"	England	m	2	2			3	48	4	"
"	29	"	U. S.	m	2	2			3	52		
Salesman	67	"	"	m	4	1		1	3	52		
Shipping clerk	29	"	"	m					1	49	3	sick
"	27	"	Canada	m					1	32	20	no work
Engineer	39	"	U. S.	m	1				1	52		
Store keeper	39	"	"	m					1	43	9	sick
Painter	44	"	Scotland	m	5	5	5		6	40	12	sick and no work
Finisher	26	England	England	m	1	1			2	49	3	no work
Painter	40	U. S.	U. S.	m	1	1	1		2	52		
Fireman	32	Canada	"	m					1	52		
Laborer	33	U. S.	"	m	1	1			2	44	8	sick and no work
Machinist	22	"	"	m					1	44	8	no work
"	42	"	"	m	3	3	3		4	35	17	sickness
"	38	"	Germany	m	2	2			3	52		
Blacksmith helper	43	Ireland	Ireland	m	4	4	3		5	44	8	no work
Blacksmith	45	U. S.	U. S.	m	3	3	3		4	34	18	sick
Machinist	34	Germany	Germany	m	2	2	1		3	52		
"	22	U. S.	U. S.	m					1	50	2	no work
"	30	"	Germany	m	3	3			4	50	2	sick and no work
Foreman	29	"	"	m	1	1			2	52		
Machinist	40	"	U. S.	m					1	49	3	no work

of the Employees Canvassed in Jackson.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$11 00	\$429 00		\$429 00	\$350				\$75	\$5 00			1	\$6 00			\$125
12 00	624 00		624 00	525				75	9 00		\$2000	2	9 00			500
15 00	680 00		680 00	660				60	6 00			1	6 00			1000
12 00	528 00	\$410	938 00	438	\$400			500			2000	1	6 00			1000
12 00	576 00		576 00	500				65	8 00		2000	1	9 00			
11 00	484 00		484 00	484					10 00			1	6 00			700
12 60	617 40	42	659 40	500	2000	\$450	\$100				2000	2	9 00			2500
12 00	576 00	120	696 00	696	1000						2000	2	9 00			3000
12 00	552 00		552 00	500	1800	900						2	10 00	16	\$100	600
13 00	468 00		468 00	350	1000	700	50	25				1	6 00			550
12 60	441 00	108	549 00	475	1200		45		9 00			1	6 00			1400
12 60	579 60		579 60	450				100	10 00		2000	2	9 00			300
9 00	351 00		351 00	315				36	4 00		1000	1	6 00			300
12 00	552 00		552 00	552				70	7 00			1	6 00			100
20 00	1040 00		1040 00	700				200	8 00		2000	1	6 00	36		1000
10 00	480 00	8	488 00	400				75	8 50			1	6 00			300
10 00	500 00	100	600 00	500				100	15 00			1	6 00			200
12 00	468 00	84	552 00	402	2400	800	100	50				1	6 00			2000
10 50	408 50		408 50	400					8 00		1000	1	11 00	40		900
10 50	408 50		408 50	400					9 00			1	6 00			200
12 60	655 20	500	1155 20	900	1000			200				1	6 00			1500
12 50	625 00		625 00	300	1500	500	225	100			2000	2	9 00			1500
11 40	444 60		444 60	444								1	6 00	8		200
12 00	536 00		536 00	540	600	50	40					1	6 00			1000
14 20	788 40		788 40	650	800	150	75					1	6 00			850
10 50	546 00	150	696 00	546				150				2	8 00			400
8 00	312 00		312 00	312					5 00			1	6 00			100
12 50	612 50	80	692 50	592				100	10 00		2000	2	9 00			600
10 50	504 00		504 00	504					8 00		2000	2	9 00			300
12 00	624 00		624 00	450	1400	100	150				2000	2	9 00			1800
15 00	780 00		780 00	450	7000			300				1	6 00			7000
10 00	480 00		480 00	450					8 00		2000	1	6 00			250
9 00	368 00		368 00	288					6 00			1	6 00			400
15 00	936 00		936 00	500	1500			400			2000	1	6 00			1800
12 00	516 00		516 00	300	1250		100	100			2000	2	9 00			1500
12 00	480 00	72	552 00	450				100	8 00			1	6 00			200
12 00	588 00		588 00	480	500	200	100					1	6 00			500
20 50	1096 00		1096 00	1086	2000	800					2000	1	6 00			2000
12 30	680 60		680 60	438				200	8 00			1	6 00			450
8 25	363 00		363 00	350								1	6 00			75
7 20	316 80		316 80	216				100	6 00			1	6 00			200
12 75	446 25	100	546 25	296	1300	200	150					1	6 00			2000
13 00	678 00		678 00	678					6 00			1	6 00			200
8 40	369 60	84	453 60	350	1000	300	100					1	6 00	22	70	2000
13 50	459 00	100	559 00	400	900	100	150					2	11 00			1000
13 50	702 00		702 00	500	2000		200		free		2000	2	10 00	10	200	2200
9 00	450 00		450 00	450								1	6 00			250
14 00	700 00		700 00	500	1500	200	200				2000	1	6 00			1500
20 00	1040 00		1040 00	840	2000	600	200				1000	1	6 00			2000
10 50	514 50		514 50	400				100	6 00			1	6 00			500

TABLE No. 7.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country)†	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machinist	38	U. S.	U. S.	m	—	—	—	1	2	52	—	—
"	41	"	Germany	wf	—	—	—	—	—	26	—	vacation
"	31	"	Ireland	m	8	8	—	—	4	52	—	—
"	21	"	U. S.	m	—	—	—	1	1	2	—	no work
Laborer	53	"	"	m	3	1	—	—	2	39	13	"
Carpenter	37	"	Ireland	m	1	1	1	—	2	51	1	"
Machinist	51	"	"	m	1	—	—	—	1	52	—	—
Wood worker	48	Canada	Canada	m	—	—	—	2	3	52	—	—
"	49	U. S.	U. S.	m	—	—	—	—	1	52	—	—
"	52	"	"	m	3	1	1	—	2	33	19	sick and laid off
"	44	"	"	m	1	1	1	—	2	52	—	—
"	35	"	Canada	m	2	2	—	—	3	52	—	—
"	23	"	U. S.	m	—	—	—	—	1	52	—	—
"	60	"	"	m	2	1	—	—	2	46	6	no work
"	32	"	"	m	—	—	—	—	1	39	13	"
"	31	"	England	m	2	2	—	1	4	44	8	"
"	47	"	Switz.	m	1	1	1	—	2	52	—	—
"	27	England	England	m	1	1	—	—	2	52	—	—
"	43	Canada	Canada	m	3	2	2	—	3	52	—	—
"	39	England	England	m	2	2	—	—	3	26	—	first work in U. S.
"	26	U. S.	Germany	m	1	1	—	—	2	52	—	—
"	38	"	U. S.	m	—	—	—	2	3	45	7	no work
"	39	"	"	m	—	—	—	—	1	48	4	laid off
Molder	25	"	"	m	—	—	—	1	2	43	4	sickness and death
"	81	"	"	m	1	1	—	—	2	52	—	—
"	88	Germany	Germany	m	2	2	1	—	3	47	5	no work
"	57	U. S.	U. S.	m	2	2	1	—	3	44	8	"
"	21	"	"	m	—	—	—	—	1	50	2	"
Blacksmith	45	Germany	Germany	m	5	4	2	—	5	45	7	"
Blacksmith helper	58	Ireland	Ireland	m	5	—	—	—	1	46	6	sick
Machinist	29	U. S.	Germany	m	—	—	—	—	1	52	—	—
"	40	"	U. S.	m	2	—	—	—	1	45	7	no work
Molder	30	"	"	m	—	—	—	—	1	49	8	"
Wood worker	48	"	"	m	6	2	2	—	3	52	—	—
Molder	21	Holland	Holland	m	—	—	—	—	1	52	—	—
Wood worker	68	Canada	U. S.	m	10	2	—	—	2	48	4	out of work
Molder	21	Germany	Germany	m	—	—	—	—	1	50	2	sick
"	48	U. S.	U. S.	m	2	2	1	—	3	52	—	—
"	26	"	Ireland	m	2	—	—	—	1	49	8	no work
Bolt header	24	"	U. S.	m	2	2	—	—	3	39	13	"
Laborer	40	Germany	Germany	m	5	5	3	—	6	49	2	"
Machinist	35	U. S.	"	m	4	4	2	—	5	48	4	"
Laborer	25	England	England	m	1	1	—	—	2	46	6	"
Machinist	28	U. S.	U. S.	m	2	2	—	—	3	49	3	"
Carpenter	40	"	Ireland	m	5	5	2	—	6	44	8	"
Machinist	28	"	U. S.	m	—	—	—	—	1	52	—	—
"	24	"	Ireland	m	1	1	—	—	2	52	—	—
"	33	"	Germany	m	2	2	1	1	4	52	—	—
"	32	England	England	m	1	1	—	—	2	50	2	sick and no work
Laborer	34	Germany	Germany	m	4	4	1	—	5	39	13	no work
Machinist	22	U. S.	U. S.	m	1	1	—	—	2	52	—	—
"	23	"	"	m	1	1	—	1	3	52	—	—
Tinner	26	"	"	m	2	2	—	—	3	25	17	no work

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.			
412 50	\$550 00		\$550 00	\$400	\$1000	\$200		\$250				1	8		\$1300
12 00	312 00		312 00					30				1	8		60
13 50	702 00		702 00	500	1800	800	\$175				\$1000	1	8		1800
11 50	575 00		575 00	575								1	8		350
7 80	304 20	\$200	504 20	300	1500			200	\$10 00			1	8		2500
12 00	612 00		612 00	500				100	8 00			1	8		1000
14 70	783 40	120	884 40	800	1800		150	100				1	8		4000
12 00	655 20		655 20	550				65	9 00		2000	1	8		600
12 00	624 00		624 00	504	1000	800	120				2000	2	9		
12 00	396 00		396 00	296				100	11 00			1	8		500
12 00	624 00		624 00	600					10 00		2000	2	9		600
12 00	655 20		655 20	550				70	10 00		1000	1	8		500
10 50	546 00		546 00	496				50	7 00			1	8		300
13 00	552 00	180	732 00	650	900	300		75			2000	2	9		1000
9 00	351 00		351 00	350					7 00			1	8		400
12 50	550 00		550 00	440	1200			110				1	8		900
12 50	650 00		650 00	600					8 50		2000	2	9		500
12 00	624 00		624 00	424				200	7 00			2	9		800
13 00	674 00	50	724 00	324	1000		200	150				1	8	22	2000
9 00	234 00		234 00	325					5 00			1	8	30	50
14 00	728 00		728 00	550	500			125	10 00			1	8		1000
12 00	540 00		540 00	540					7 00			1	8		200
12 00	619 20	400	1019 20	869				150	10 00			1	8		500
12 00	576 00		576 00	576					6 00			1	8		175
13 50	702 00		702 00	600				75	8 00			1	8		400
13 50	634 50	150	784 50	650				125	7 00		1000	1	8	36	600
9 00	396 00		396 00	396					9 00			1	8		150
10 50	525 00		525 00	450				52				1	8		200
12 00	540 00		540 00	440				100	8 00		600	2	10	23	600
9 00	414 00		414 00	414					9 00			1	8	39	400
9 00	468 00		468 00	260				200				1	8		500
10 50	472 50	2000	2472 50	2200				200	17 00			1	8		3000
13 50	661 50		661 50	550				100	8 00			1	8		300
12 00	624 00		624 00	550				80	15 00			1	8		1000
9 00	468 00		468 00	368				100				1	8		75
11 30	542 40	300	842 40	550	1800	1400	200					1	8	8	500
9 00	495 00		495 00	495								1	8		100
13 50	702 00		702 00	302	2500	400	100	300			2000	2	9	17	3000
12 70	622 30		622 30	322	500		300		5 00			1	8		800
13 50	526 50		526 50	526					8 00			1	8		700
7 40	362 80	150	512 80	450	1000			50			1000	1	8	25	1400
12 00	576 00		576 00	450	1200			100			2000	1	8		1600
9 00	414 00		414 00	414					7 00			1	8		300
9 00	470 40		470 40	270	1000			200				1	8	7	1200
9 50	418 00		418 00	318	1800		100	100			2000	2	9		2000
12 00	624 00		624 00	400	1200		200					1	8		1200
9 00	468 00		468 00	300	500			150				1	8		1000
13 20	698 40		698 40	550	2500		100					1	8		3000
10 00	500 00		500 00	200	600	50	210					1	8	16	700
9 00	351 00		351 00	450					6 00		500	2	10	5	500
12 00	624 00		624 00	524				100	6 00			1	8		200
13 50	702 00		702 00	702	1000				6 00			1	8		1600
10 50	367 50		367 50	367					4 00		2000	2	9		200

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	30	England	England	m	2	2	1		3	52		
Supt. of order dept.	45	U. S.	"	m	4	4	2		6	46	4	vacation
Machinist	50	Ireland	Ireland	m	10	8	2		10	49	3	no work
"	27	U. S.	U. S.	m	1	1			2	52		
"	38	"	"	m	1	1			2	51	1	vacation
"	39	"	Ireland	m	1	1	1		2	50	2	"
"	36	Germany	Germany	m	4	4	3		7	52		
"	25	"	"	m	2	2			2	52		
"	47	U. S.	U. S.	m	3	3	1		4	35	17	out of work
"	60	"	"	m	2	2	2		3	26	26	sick and no work
Laborer	40	Germany	Germany	m	4	4	2		6	52		
"	35	Poland	Poland	m	1	1			2	36	16	no work
"	27	Germany	Germany	m	2	2		1	3	4	6	"
"	36	Ireland	Ireland	m	6	6	3		9	52		
Molder	55	U. S.	U. S.	m	3	1	1	1	5	51	1	sick
Laborer	44	Germany	Germany	m	2	2			3	52		
Molder	26	U. S.	Canada	m	1	1			2	52		
"	36	"	Ireland	m	1	1	1		2	32	20	burnt
"	31	"	Scotland	m	2	2	1		3	39	13	out of work
Tinner	17	"	Ireland	s						44	8	no work
Machinist	18	"	U. S.	s						49	3	"
"	20	"	"	s						44	8	"
Molder	16	Scotland	Scotland	s						52		
Machine hand	17	U. S.	Ireland	s						44	8	no work
Machinist	17	England	England	s						52		
"	21	Germany	Germany	s			2	2	2	26	26	sick and no work
"	19	U. S.	England	s			2	2	2	35	17	no work
Machine hand	16	"	Ireland	s						52		
"	16	"	England	s						52		
Molder	20	"	Ireland	s						32	20	no work
Wood worker	13	"	England	s						13		first work
Painter	18	England	"	s						52		
Machinist	19	U. S.	U. S.	s						49	3	no work
"	28	"	"	s			1	1	1	48	4	"
"	25	"	England	s			1	1	1	44	8	"
Tinner	17	"	U. S.	s						31	21	"
"	19	"	"	s						49	3	"
"	19	"	"	s			2	2	2	51	1	"
Machinist	23	"	"	s			1	1	1	52		
"	20	"	England	s						52		
Machine hand	15	"	U. S.	s						44	8	no work
"	17	"	Ireland	s						47	5	"
Machinist	26	"	Germany	s						35	17	"
"	29	Germany	"	s						51	1	"
"	24	U. S.	Canada	s						32	20	sick and no work
"	24	"	Germany	s						51	1	no work
"	23	England	England	s						50	2	"
"	24	U. S.	U. S.	s			2	2	2	49	3	"
"	19	"	Ireland	s						48	4	"
"	20	"	U. S.	s						44	8	sore fingers
"	20	"	"	s			1	1	1	39	13	no work
"	19	"	Germany	s						26	26	"
"	20	Germany	"	s			2	2	2	52		

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other source.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$12 70	\$800 40		\$860 40	\$860					\$7 00		\$2100	2	\$9 00	9	\$150
15 00	720 00		720 00	500	\$2500		\$50	\$150				2	9 00		3000
13 20	646 80	\$100	746 80	746					12 00		2000	1	18 00	41	275
10 20	580 40		580 40	350	1000	\$400	125	85				1	6 00		1200
13 50	688 50		688 50	688					8 00		2000	1	6 00		600
13 50	675 00		675 00	550				75	7 00		2000	2	9 00		609
10 20	580 40		580 40	400	1300	800	100					1	10 00	9	2000
12 00	624 00		624 00	425	1400	800	180				1000	1	6 00	9	1500
12 80	448 00		448 00	448	900	200					1000	2	11 00		1200
12 00	312 00		312 00	850					10 00			1	6 00		75
7 40	384 80		384 80	384					5 00			1	6 00	6	130
7 50	270 00		270 00	300	500						675	1	6 00	16	700
7 50	315 00	75	420 00	420					6 00			1	6 00	7	200
9 00	468 00		468 00	368	600	200						1	6 00	8	500
19 00	969 00		969 00	700	1400	700	100	200			1000	1	6 00		1000
7 30	379 80	75	454 80	375	450	200	75					2	10 00	4	400
13 80	717 60		717 60	500			200		7 00		2000	2	9 00		900
13 50	432 00		432 00	375			50		6 00			1	6 00		
12 70	495 30	112	607 30	607	700				8 00			1	6 00		2000
4 80	211 20		211 20				*								
4 50	220 50		220 50				*		*			1	6 00		
4 80	211 20		211 20				*		*			1	6 00		35
3 80	202 80		202 80				*		*			1	6 00	9	100
3 80	158 40		158 40				*		*			1	6 00		
4 50	234 00		234 00				*		*			1	6 00	7	
7 50	195 00		195 00	195								1	6 00	8	75
5 00	175 00		175 00	175								1	6 00		60
4 00	208 00		208 00				*		*			1	6 00		
4 00	208 00		208 00				*		*			1	6 00		
3 00	96 00		96 00				*		*			1	6 00		15
3 00	39 00		39 00				*		*			1	6 00		
9 00	468 00		468 00				*		*			1	6 00		100
7 50	367 50		367 50				50		\$4 50			1	6 00		125
10 50	504 00		504 00						5 00		1000	2	14 00		125
12 00	528 00		528 00						3 50			1	6 00		100
6 00	186 00		186 00						3 00			1	6 00		
7 50	367 50		367 50						5 00			1	6 00		40
8 00	408 00		408 00						5 00			1	6 00		150
12 00	624 00		624 00						4 50			1	6 00		350
16 00	832 00		832 00						4 50			1	6 00		100
3 90	171 60		171 60						2 00			1	6 00		
3 90	183 80		183 80						2 00			1	6 00		
7 50	262 50		262 50						3 00		500	2	9 00		200
12 00	612 00		612 00				200		4 00			1	6 00	27	600
12 00	384 00		384 00				100					1	6 00		300
9 00	459 00		459 00						3 50			2	13 50		100
12 00	600 00	25	625 00		250		115	50				1	6 00	5	400
12 75	624 75		624 75	524				100	10 00			1	6 00		
7 50	360 00		360 00									1	6 00		100
5 70	250 80		250 80							5 00		1	6 00		35
9 00	351 00		351 00									1	6 00		500
5 00	130 00		130 00							4 50		1	6 00		80
9 00	468 00		468 00							3 50		1	6 00	7	70

* Lives at home and gives wages to parents.

‡ Lives at home and supports family.

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist.....	21	U. S.	Germany	s						48	4	no work
".....	21	Germany	"	s						49	3	"
Core maker.....	16	U. S.	Ireland	s						52		
Machinist.....	20	"	U. S.	s						39	13	sick and no work
".....	18	"	Germany	s						48	4	no work
Molder.....	26	Canada	England	s						50	2	vacation
".....	30	U. S.	U. S.	s			1	1		49	3	sick and no work
".....	22	England	England	s						53		
".....	20	U. S.	U. S.	s						26	26	no work
".....	19	"	Ireland	s						53		
Laborer.....	27	Poland	Poland	s						52		
".....	28	U. S.	Ireland	s						48	4	no work
Machinist.....	28	"	Germany	s						31	21	"
Wood worker.....	29	"	U. S.	s						44	8	sick
".....	29	"	Germany	s				2	2	46	6	"
".....	40	"	U. S.	s				5	5	48	4	no work
Trimmer.....	26	England	England	s						52		
Stencilier.....	18	U. S.	U. S.	s						49	3	no work
Engineer.....	18	"	"	s						52		
Helper.....	29	England	Ireland	s						46	6	no work
Laborer.....	21	Poland	Poland	s						44	8	no work
Wood worker.....	27	Canada	Canada	s						52		
Laborer.....	30	U. S.	U. S.	s						52		
Wood worker.....	22	"	England	s						37	15	no work
".....	20	"	U. S.	s				1	1	44	8	sick and laid off
".....	19	Canada	Canada	s						52		
".....	27	England	England	s						26	26	no work
Packer.....	26	U. S.	U. S.	s						43	9	sick
Wood worker.....	16	"	Ireland	s						50	2	laid off
Machinist.....	22	"	England	s						48	4	accident
".....	24	"	U. S.	s				1	1	52		
".....	23	"	"	s						49	3	no work
File maker.....	28	"	"	s						52		
Molder.....	25	Canada	Canada	s				1	1	50	2	vacation
".....	20	U. S.	U. S.	s				1	1	48	4	sick and no work
".....	28	Germany	Germany	s						39	13	no work
".....	20	U. S.	Ireland	s						49	3	sick
".....	21	"	"	s						52		
".....	21	"	"	s				1	1	39	13	out of work
".....	23	"	U. S.	s				3	3	39	13	out of work
Wood worker.....	19	"	"	s						50	2	laid off
".....	29	"	"	m					1	47	5	no work
COLLINS M'NF'G CO.												
Wood worker.....	17	"	Germany	s						48	6	short hours & no work
Blacksmith.....	29	"	U. S.	s						45	7	"
Wood worker.....	38	"	"	m	1	1	1		2	37	15	"
".....	31	Canada	Canada	m					1	83	19	"
Foreman blacksmith & woodworkers.....	29	U. S.	U. S.	m	2	2			2	50	2	short hours
Painter.....	18	"	"	s						37	15	sick, no work, short h's
".....	20	Canada	Canada	s						42	10	short hours & no work
".....	21	U. S.	U. S.	s						24	28	"
".....	16	"	"	s						46	6	"

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.	Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.		If boarding, cost per week, including room.	If renting, monthly rental.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
35 00	\$228 00	-----	\$228 00	-----	-----	-----	-----	\$3 50	-----	-----	1	\$6 00	-----	-----	\$50
9 00	441 00	-----	441 00	-----	-----	-----	-----	3 00	-----	-----	1	6 00	-----	-----	75
4 50	234 00	-----	234 00	-----	-----	-----	-----	3 00	-----	-----	1	6 00	-----	-----	-----
7 80	304 20	-----	304 30	-----	-----	-----	-----	3 00	-----	\$1000	1	6 00	-----	-----	50
4 50	216 00	-----	216 00	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	-----
12 70	625 00	\$5	640 00	-----	-----	-----	-----	-----	-----	-----	2	9 00	2	\$15	250
12 50	612 50	-----	612 50	-----	-----	-----	-----	8 00	1000	-----	2	11 00	-----	-----	100
12 50	702 00	-----	702 00	-----	-----	-----	-----	4 00	-----	-----	1	6 00	-----	-----	50
7 50	195 00	-----	195 00	-----	-----	-----	-----	8 50	-----	-----	1	6 00	-----	-----	75
3 90	202 80	-----	202 80	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	50
7 50	390 00	-----	390 00	-----	-----	-----	25	8 50	-----	-----	1	6 00	-----	5	100
7 80	374 40	-----	374 40	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	50
10 50	325 50	-----	325 50	-----	-----	-----	-----	4 00	-----	-----	1	6 00	-----	-----	175
12 00	528 00	-----	528 00	-----	-----	-----	100	4 00	-----	-----	2	10 00	-----	-----	100
12 00	552 00	125	677 00	-----	-----	-----	150	3 50	-----	-----	1	6 00	-----	-----	2500
12 00	578 00	-----	578 00	\$500	\$1000	-----	\$50	-----	-----	-----	1	6 00	-----	-----	1500
12 00	624 00	-----	624 00	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	600
7 50	367 50	-----	367 50	-----	-----	-----	-----	3 50	-----	-----	1	6 00	16	-----	-----
4 80	249 60	-----	249 60	-----	-----	-----	-----	free	-----	-----	1	6 00	-----	-----	-----
8 55	393 30	-----	393 30	-----	-----	-----	-----	3 50	1000	-----	2	11 00	17	-----	125
7 50	330 00	-----	330 00	-----	-----	-----	-----	3 00	-----	-----	1	6 00	2	10	50
14 00	728 00	-----	728 00	-----	-----	-----	-----	4 00	-----	-----	1	6 00	23	-----	100
9 00	468 00	-----	468 00	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	50
9 00	333 00	-----	333 00	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	40
10 50	462 00	-----	462 00	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	100
4 50	234 00	-----	234 00	-----	-----	-----	-----	3 00	-----	-----	1	6 00	-----	-----	15
10 50	278 00	-----	278 00	-----	-----	-----	-----	4 00	-----	-----	1	6 00	22	-----	200
9 00	337 00	-----	337 00	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	100
3 90	180 00	-----	180 00	-----	-----	-----	-----	3 00	-----	-----	1	6 00	-----	-----	-----
13 50	648 00	-----	648 00	-----	-----	-----	200	5 00	-----	-----	1	6 00	-----	-----	300
12 00	624 00	200	824 00	724	-----	-----	100	\$10 00	-----	1000	1	6 00	-----	-----	200
8 70	426 30	25	451 30	-----	-----	-----	75	3 50	-----	-----	1	6 00	-----	-----	225
12 15	631 80	-----	631 80	-----	-----	-----	200	-----	-----	-----	1	6 00	-----	-----	200
12 00	600 00	-----	600 00	500	1500	-----	50	100	-----	1000	2	10 00	2	10	1600
6 70	321 60	-----	321 60	-----	-----	-----	-----	3 50	-----	-----	1	6 00	-----	-----	50
12 50	526 50	-----	526 50	-----	-----	-----	-----	4 00	-----	-----	1	6 00	-----	8	200
12 00	588 00	-----	588 00	-----	-----	-----	150	4 00	-----	-----	1	6 00	-----	-----	325
12 70	660 40	-----	660 40	-----	-----	-----	200	-----	-----	-----	1	6 00	-----	-----	350
10 75	419 25	-----	419 25	-----	-----	-----	-----	5 00	-----	-----	1	6 00	-----	-----	50
10 00	390 00	-----	390 00	390	-----	-----	-----	-----	-----	-----	1	6 00	-----	-----	75
6 00	300 00	-----	300 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	60
11 40	535 80	-----	535 80	425	-----	-----	-----	8 00	-----	-----	1	6 00	-----	-----	100
4 50	207 00	-----	207 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
12 00	540 00	-----	540 00	-----	-----	-----	-----	4 50	-----	-----	-----	-----	-----	-----	100
15 00	558 00	-----	555 00	355	1500	\$300	200	-----	-----	-----	-----	-----	-----	-----	1200
10 00	390 00	36	366 00	366	-----	-----	-----	6 00	-----	-----	-----	-----	13	-----	500
15 00	750 00	72	822 00	650	1000	475	125	-----	-----	-----	-----	-----	-----	-----	1000
4 82	178 20	-----	178 20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
6 00	252 00	-----	252 00	-----	-----	-----	-----	3 50	-----	-----	-----	-----	-----	25	25
7 50	190 60	-----	190 00	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	-----	75
7 50	345 00	-----	345 00	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	-----	-----

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Painter	26	U. S.	U. S.	s						46	6	short h'rs & no work
Blacksmith	24	"	"	m						37	15	"
Engineer	40	"	Ireland	m	1	1				42	10	"
Machinist	18	"	U. S.	s	2	2	2	2	2	33	19	"
										46	6	"
Laborer	23	"	Ireland	m					1	24	28	"
Blacksmith helper	22	"	U. S.	s				1	1	24	28	"
Laborer	20	"	"	s						50	2	short hours
Blacksmith	55	"	"	m	3				1	46	6	short h'rs & no work
"	25	"	Germany	s						38	19	"
"	27	"	"	s						38	19	"
"	52	"	U. S.	m	1	1	1	1	1	24	28	"
"	31	Germany	Germany	m	1	1				24	28	"
"	32	Canada	Scotland	m	1	1				37	15	"
"	35	U. S.	U. S.	m	2	2	2	2	2	38	19	short h'rs & vacation
Blacksmith helper	29	"	Germany	s						24	28	short h'rs & no work
Painter	47	"	England	w	1					47	5	shut down & short h'rs
Laborer	46	"	U. S.	s	1					37	15	sick, no w't & short h'rs
Cart trimmer	19	"	Ireland	s						33	19	short hours
"	19	"	U. S.	s						33	19	short h'rs & no work
Trimmer	22	"	Ireland	s						47	5	"
Superintendent	39	"	U. S.	m	2	2	2	2	2	50	2	short hours
Wood worker	32	"	"	m				1	1	37	15	short h'rs & no work
	30	Germany	Germany	m						42	10	"
Laborer	30	U. S.	"	m					1	24	28	"
Machine hand	17	England	England	s						24	28	"
Laborer	29	Ireland	Ireland	m					1	42	10	"
	18	U. S.	"	s						18	34	"
Machinist	25	Germany	Germany	m	2	2			3	42	10	"
Wood worker	28	U. S.	U. S.	s						44	8	"
"	35	"	Ireland	m					1	37	15	"
Tire setter	23	Germany	Germany	m	1	1			2	24	28	"
Painter	29	Scotland	Scotland	m	2	2		1	4	24	28	short h'rs & sick
"	31	U. S.	Ireland	m	1	1			2	48	4	short h'rs, sick & no w't
"	20	"	"	s						45	7	short h'rs & no work
"	20	"	"	s						49	3	"
"	20	"	"	s						48	9	short h'rs, sick & no w't
"	18	"	"	s						37	15	short h'rs & no work
"	18	"	England	s						46	8	short h'rs, sick & no w't
"	27	Canada	Canada	s						47	5	short h'rs & shut down
"	29	U. S.	U. S.	m				2	3	48	4	"
"	22	Sweden	Sweden	s				2	2	30	22	short h'rs & sick
"	30	U. S.	U. S.	m	1	1	1		2	42	10	short h'rs & no work
"	17	"	"	s						46	6	"
"	18	"	Ireland	s						42	10	"
"	21	England	England	s						45	7	"
"	21	U. S.	Ireland	s				2	2	29	23	"
"	23	"	"	s				1	1	24	28	short h'rs, sick & no w't
Wood worker	45	"	U. S.	m	5	4	2		5	48	4	short h'rs & no work
Painter	40	"	"	m	3	3	1		4	50	2	short hours
"	44	England	England	m	2	1	1		2	50	2	"
Carriage trimmer	22	U. S.	U. S.	m					1	42	10	short h'rs & no work
Wood worker	24	"	Ireland	m					1	46	6	"

TABLE No. 7.—CONTINUED.—Showing Individual Reports.

Income.				Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$10 00	\$460 00		\$460 00					\$50		\$4 00					\$40
8 50	314 50	\$40	354 50	\$325					\$7 00						200
15 00	630 00	144	774 00	674	\$2500			100							3000
14 00	462 00		462 00	362	1200	\$350	\$100								1400
7 50	345 00		345 00							3 85					
6 00	144 00		144 00	144					8 00						75
8 00	192 00		192 00					*		3 50					50
8 00	300 00		300 00							*					75
12 00	552 00		552 00	552					6 50						400
9 00	297 00		297 00							3 75	1	\$4 00			50
9 00	297 00		297 00							3 75					75
15 00	360 00		360 00	360	2500										3000
15 00	360 00		360 00	360					6 00		\$2500	1	7 00	8	800
7 00	259 00		259 00	234	500	300	25				1000	1	3 00	22	600
18 00	594 00		594 00	594					8 00						700
6 00	144 00		144 00							4 00					25
10 50	493 50		493 50							3 50	2000	1	3 00		75
10 50	388 50		388 50							4 00					50
8 00	264 00		264 00							3 00					50
9 00	297 00		297 00												30
12 00	564 00		564 00					120		3 50					300
35 00	1750 00	200	1950 00	1400				500	12 00						2000
7 50	277 50	150	427 50	400	1000	400	100								1000
6 00	252 00		252 00	252					6 00					6	300
5 00	120 00		120 00	120					7 00						100
6 00	144 00		144 00					*		*				7	
8 50	357 00		357 00	375					8 00						\$18
6 00	108 00		108 00							4 00					
7 50	315 00		315 00	290				25	6 00		2000	1	3 00	8	10
9 00	396 00		396 00							3 50					100
10 00	370 00	675	1045 00	745	3200	240	100	200							3600
6 00	144 00	100	244 00	244					8 00					6	50
18 00	432 00		432 00	450					free					22	600
9 00	432 00		432 00	432					10 00						300
8 00	360 00		360 00							3 00					100
9 50	465 50		465 50							3 50					60
6 50	279 50		279 50					100		3 00					300
7 00	259 00		259 00					100		†					250
8 00	368 00		368 00					30		†					160
12 00	564 00		564 00							4 50					100
13 50	648 00	120	768 00	400	2500	1800	318	50							1200
7 50	225 00		225 00							3 50				6	50
12 00	504 00		504 00	800				200	7 00		2000	1	3 00		300
9 00	414 00		414 00							3 50					100
10 00	420 30		420 00							4 00					
10 00	450 00	12	462 00		\$ 700					3 50				19	200
10 00	290 00		290 00							5 00					75
12 00	288 00		288 00							5 00					60
15 00	720 00		720 00	600	1800	600	100								1500
9 00	450 00	400	850 00	750				100	6 00		1000				300
12 00	600 00	24	624 00	624					10 00					38	1200
13 00	546 00		546 00	546					8 50						300
9 00	414 00		414 00					100		6 00					500

* Lives at home and gives wages to parents. † Lives at home and pays no stated amount for board.
 § Owns one-fifth interest in home.

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Laborer	30	U. S.	U. S.	m	1	1	1		2	46	6	short hours & no work
Contractor	35	"	"	m	1	1			2	50	2	short hours
Wood worker	18	"	Germany	s						44	8	short hours & no work
THE KNICKERBOCKER CO.												
Tinner	28	Germany	"	s						49	3	short hours
Wood worker	22	U. S.	U. S.	s						32	20	short hours & no work
"	19	"	Ireland	s				1	1	27	25	"
"	18	"	"	s						36	16	"
Tinner	18	"	U. S.	s						49	3	short hours
Laborer	19	"	"	s						41	11	short hours & no work
Wood worker	18	"	"	s						23	29	short hours and sick
"	14	"	Germany	s						47	5	short hours & no work
"	43	"	"	m	2	1	1		2	49	3	short hours
Machinist	40	"	"	m	3	3	2		4	23	29	short hours & sickness
Wood worker	27	"	"	m	1	1			2	36	16	short hours and sick
"	43	"	"	m					1	23	29	"
"	34	"	"	m					1	49	3	short hours
Mill wright	45	"	"	m	5	4	3		5	49	3	"
Wood worker	43	"	"	m	3	3	1		4	45	7	short hours & no work
"	62	"	"	m	1				1	23	29	short hours and sick
Engineer	31	"	"	m	1	1			2	49	3	short hours
Tinner	47	Canada	England	m	4	1			2	49	3	"
Painter	27	Finland	Finland	m	1	1			2	49	3	"
Carpenter	27	Switz.	Switz.	m	4	1			5	49	3	"
Wood worker	53	Germany	Germany	m	1				1	43	9	short hours & no work
"	24	"	"	m					1	49	3	short hours
"	24	"	"	wr	2	2			2	46	6	short hours & no work
JOHN HUTCHINSON MFG. CO.												
Wood worker	44	U. S.	U. S.	m	3	3	2		4	52		
"	45	"	Scotland	m					1	44	8	sick and no work
"	49	"	U. S.	m	4	2	1		3	52		
"	45	"	"	m	3	3	3		4	52		
"	45	"	"	m	2	2	1	1	4	52		
"	26	"	"	m	1	1			2	52		
Engineer	42	Germany	Germany	m	6	6	2		7	52		
Machinist	21	U. S.	U. S.	s						44	8	no work
"	30	"	"	m	3	3	1		4	52		
"	20	"	"	s						32	20	no work
"	21	"	Germany	s						52		
"	19	"	U. S.	s						52		
"	43	"	Ireland	m	5	5	5		6	52		
"	23	"	U. S.	s						52		
"	23	"	"	s						39	13	no work
"	20	"	"	s						52		
"	19	"	Ireland	s						32	20	no work
"	43	"	Scotland	m	3	3	3		4	52		

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt. b.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$414 00		\$414 00	\$414					\$5 00							\$200
8 00	400 00		400 00	300				\$100	9 00	*	\$2000	1	\$3 00			500
6 00	264 00		264 00					*		*						
9 00	441 00		441 00							\$3 25					\$10	100
9 00	288 00		288 00							3 00						400
7 50	202 50		202 50					50		4 50						100
6 00	216 00		216 00							3 50						
6 00	294 00		294 00					10		3 00						125
6 60	270 60		270 60							3 00						300
6 00	138 00		138 00					*		*						100
4 00	188 00		188 00					*		*						
9 00	441 00	\$96	537 00	450	\$1000	\$100	\$80									600
13 50	310 50		310 50	450					6 00							250
9 00	324 00		324 00	324					6 00							300
12 00	276 00	30	306 00	700	2000						4000	1	2 00			2000
9 00	441 00		441 00	400	2500		40				2000					3000
30 00	1470 00		1470 00	900	1500			500	20 00							
9 00	405 00		405 00	405					11 00							350
8 10	186 30	120	306 30	375					9 00			1	6 00			300
12 00	588 00		588 00	550					9 00		2000					600
15 00	735 00	150	885 00	585	2500	400	300				2000	1	3 60	10		2500
10 00	490 00		490 00	490					7 00					9		200
13 50	661 50		661 50	550	1400	100	80				600	1	4 00	6	800	1600
8 00	344 00		344 00	344					5 00					8	100	300
10 00	490 00		490 00	390	800	300	100				500	1	4 00	8	500	800
9 00	414 00		414 00	414					4 00		600	1	4 00	7		250
12 00	624 00		624 00	500	1500			100			2000	1	3 00			2000
10 50	462 00		462 00	462					10 00		1000					800
12 00	624 00		624 00	500	1000	200	90									1500
14 00	728 00		728 00	375	1000			350			2000	1	3 00			1800
12 60	655 20		655 20	355	1500	1200	300									600
10 50	546 00	100	646 00	525				150	6 00							500
12 00	624 00	140	764 00	700					6 00					18	52	500
5 45	239 80		239 80					25		\$ 00						100
12 00	624 00	150	774 00	500				250	8 00		3000	1	15 00			2500
5 50	176 00		176 00							3 50		1	3 00			
7 50	390 00		390 00							3 00						30
7 50	390 00		390 00					25		3 75						100
11 00	572 00		572 00	300	1700	800	300				2000					1200
10 50	546 00		546 00					300		3 50						400
6 00	234 00		234 00							3 50						100
6 00	312 00		312 00							2 50						40
7 50	240 00		240 00							4 00						30
13 50	702 00	96	798 00	450	2000	800	250									3000

* Lives at home and gives wages to parents.

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
F. L. ELMS & Co.												
Carriage trimmer	27	U. S.	U. S.	m	1	1			2	48	4	short hours and sick
"	17	"	"	s						49	3	short h'rs and no w'k
"	22	"	"	s				3	3	50	2	short hours
Blacksmith helper	31	"	"	m					1	37	15	short h'rs and no w'k
Blacksmith	26	Canada	Canada	s						33	19	"
Foreman of painters	39	U. S.	U. S.	m	2	2	1		3	50	2	short hours
Painter	20	"	"	s						14	33	short h'rs, sick & no w'k
"	27	"	Germany	m	2	2	1	1	4	48	4	short hours, vacation
"	20	"	England	m					1	48	4	"
"	46	"	U. S.	m					1	50	2	short hours
"	30	"	"	m					1	50	2	"
"	17	"	"	s						50	2	"
"	19	Canada	Canada	s						37	15	short h'rs and no w'k
"	19	Scotland	Scotland	s						37	15	short h'rs, sick & no w'k
Blacksmith	49	England	England	m	4	4	1		5	46	6	short hours and sick
Wood worker	20	"	"	s						46	6	"
Shipping clerk	23	U. S.	U. S.	s				2	2	50	2	short hours

TABLE No. 7.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$16 50	\$792 00		\$792 00	\$662				\$130 *	\$8 00							\$700
4 00	196 00		196 00													75
10 50	525 00		525 00							\$5 00						200
9 00	383 00		383 00	338					5 00							100
12 00	896 00		896 00							3 50					\$2	
19 20	960 00		960 00	800			150		12 00		\$3000					1000
9 00	126 00		126 00							4 50						25
10 50	504 00		504 00	504					8 50							100
9 00	432 00		432 00	432					6 00							200
10 50	525 00		525 00	525					8 50							900
9 00	450 00		450 00	450					6 00							225
6 00	300 00		300 00				100			†						300
9 00	383 00		383 00				25			4 00						50
7 50	277 50		277 50							4 00					10	40
12 00	552 00	\$75	627 00	627					11 00						28	300
10 50	428 00		428 00							4 00					19	200
10 00	500 00		500 00				100			4 00						250

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

JACKSON.

Three hundred and twenty-one employes were canvassed: F. L. Elms & Co. (manufacturers of carriages and road carts), 17; John Hutchinson Manufacturing Co. (flour mill machinery), 18; The Knickerbocker Co. (manufacturers of special flour mill machinery), 23; Collins Manufacturing Co. (carts and buggies), 65; Geo. T. Smith Millings Purifier Co. (flour mill machinery), 198.

Nationality: Americans, 240; Germans, 27; Englishmen, 21; Canadians, 16; Irishmen, 7; Scotchmen, 3; Polanders, 3; Hollanders, Swedes, Finlanders and Swiss, 1 each. 75 per cent are Americans and 25+ per cent foreigners. Of the foreigners 33+ per cent are Germans, 28- per cent Englishmen, 20- per cent Canadians, 8+ per cent Irishmen, 4- per cent Polanders, 4- per cent Scotchmen, 1+ per cent each Holland, Swede, Finish and Swiss. Parentage of those born in the United States: American, 153; German, 22; Irish, 40; English, 15; Scotch, 4; Canadian, 5; Swiss, 1. 64+ per cent have American and 36 per cent foreign parents. One hundred and eighty-four employes are married, 133 single and 4 widowers. 57+ per cent are married, 41+ per cent single and 1+ per cent widowers. There are employed 2 boys, one 15 years and one 14 years of age. One hundred and nine support self only, 20 support others than self by boarding and 192 support families: Americans, 138; Germans, 22; Englishmen, 11; Canadians, 9; Irishmen, 7; Hollanders, Polanders, Scotchmen, Finlanders and Swiss, 1 each. In 192 families there are 319 children, of whom 271 are supported. Fifty-five married men have no children: 44 or 80 per cent are Americans, 4 Canadians, 3 Germans, 2 Irishmen, 1 Englishman and 1 Hollander. Of the children supported 100 are under 5 years of age, 162 are 5 and under 20 and 9 are over 20. One hundred and twenty-two attend school, which is 75+ per cent of school age. Ninety-seven or 80- per cent attend the public schools, 23 parochial and 2 commercial college. Number of persons supported in families, 497; by boarding, 26. Forty-five employes support 67 persons besides wife and children. Total number of weeks worked during the year, 14,186; average, 44.1+. Two hundred and forty-three men or 76 per cent lost 2,441 weeks, or 46 years and 49 weeks. Cause of lost time: Short hours and no work, 58; short hours, 23; short hours, no work and sickness, 8; short hours and shut down, 3; short hours and vacation, 3; short hours and sickness, 11; no work, 93; sickness, 15; sickness and no work, 13; sickness and laid off, 3; vacation, 7; laid off, 3; accident, 3.

Total annual earnings, \$148,399.65; average, \$462.30. Total income from other resources, \$9,180, as follows: Family earnings, \$3,645; boarding, \$2,075; pensions, \$312; interest, \$838; rent, \$1,560; other sources, \$750. Total annual earnings of Americans, \$110,469.25; average, \$460.28; Canadians, \$8,055.20; average, \$503.45; Englishmen, \$10,451.50; average, \$497.69; Germans, \$11,972; average, \$443.40; Irishmen, \$3,704.90; average, \$529.27; Hollander, \$468; average, \$468; Polanders, \$990; average, \$330; Swede, \$225; average, \$225; Scotchmen, \$912.30; average, \$304.10; Finlander, \$490; average, \$490; Swiss, \$661.50; average, \$661.50. Average weekly wages of married men, \$11.78; single men, \$8.24; all employes, \$10.31. Wages paid per week: Two employes, \$3 each; two, \$3.60; four, \$3.90; four, \$4; six, \$4.50; three, \$4.80; one, \$4.82; three, \$5; one, \$5.50; one, \$5.45; one, \$5.70; eighteen, \$6; one, \$6.60; one, \$6.70; two, \$7; one, \$7.20; one, \$7.30; two, \$7.40; twenty-two, \$7.50; three, \$7.80; eight, \$8; one, \$8.10; one, \$8.25; one, \$8.40; two, \$8.50; one, \$8.55; one, \$8.70; forty-four, \$9; one, \$9.50; one, \$9.90; fourteen, \$10; two, \$10.20; twenty-two, \$10.50; one, \$10.75; three, \$11; two, \$11.40; one, \$11.50; fifty-seven, \$12; one, \$12.15; one, \$12.30; six, \$12.50; seven, \$12.60; five, \$12.70; three, \$12.75; one, \$12.80; one, \$12.90; two, \$13; two, \$13.20; twenty, \$13.50; one, \$13.80; five, \$14; one, \$14.20;

one, \$14.70; ten, \$15; one, \$16; one, \$16.50; three, \$18; one, \$19; one, \$19.20; two, \$20; one, \$20.50; one, \$30; one, \$35.

Total family expenses, \$92,787; per capita, \$134.67; Americans, \$68,622; per capita, \$144.47; Canadians, \$3,986; per capita, \$142.36; Englishmen, \$5,546; per capita, \$128.98; Germans, \$9,122; per capita, \$100.24; Irishmen, \$3,353; per capita, \$101.61; Hollanders, \$368; per capita, \$184; Polanders, \$300; per capita, \$100; Scotchmen, \$450; per capita, \$30; Finlanders, \$490; per capita, \$163.33; Swiss, \$550; per capita, \$91.67.

Number owning homes, 81: Americans, 58; Canadians, 6; Englishmen, 6; Germans, 7; Irishmen, 2; Polanders, 1; Swiss, 1. Seventy-seven married men and 4 single men own homes. 41+ per cent of married men own homes. 72+ per cent of home owners are Americans and 28+ per cent foreigners. Total value of homes, \$113,930; average, \$1,406.54. Americans, \$89,850; average, \$1,549.13; Canadians, \$7,500; average, \$1,250; Englishmen, \$4,830; average, \$805; Germans, \$8,250; average, \$1,178.57; Irishmen, \$1,600; average, \$800; Swiss, \$1,400; average, \$1,400; Polanders, \$500; average, \$500. The homes of 45 employes are mortgaged, which is 55+ per cent. Value of mortgaged homes, \$61,250; mortgaged for \$20,465, which is 33+ per cent of valuation. The homes of 30 Americans are mortgaged for \$14,915; 3 Canadians, \$2,100; 4 Englishmen, \$850; 5 Germans, \$2,000; 2 Irishmen, \$500; 1 Swiss, \$100. During the year 54 employes made payments or improvements upon homes amounting to \$7,493, and 105 men saved \$13,523. Total number of employes who saved, 146, which is 45+ per cent. Total savings, including payments and improvements upon homes, \$21,016, which is 14+ per cent of total earnings. Total present worth of 292 employes (29 not reporting), \$193,000; average, \$660.96: Americans, 212; total, \$149,495; average, \$705.16; Canadians, 16; total, \$10,390; average, \$649.37; Englishmen, 20; total, \$9,325; average, \$466.25; Germans, 27; total, \$14,700; average, \$544.44; Irishmen, 7; total, \$5,575; average, \$796.42; Hollander, 1; total, \$75; Polanders, 3; total, \$850; average, \$283.33; Swede, 1; total, \$50; Scotchmen, 3; total, \$740; average, \$246.66; Finlander, 1; total, \$200; Swiss, 1; total, \$1,600. Five Canadians had \$32 upon arrival in this country; 5 Englishmen, \$276; 9 Germans, \$1,020; 3 Irishmen, \$168; 3 Polanders, \$30; 1 Swiss, \$600. Total present worth of foreigners, \$43,505.

Number renting homes, 107: Americans, 79; Canadians, 3; Englishmen, 7; Germans, 12; Irishmen, 5; Finn, 1. Two renters are single men, one a widower and two have rent free. 56+ per cent of married men rent and 33+ per cent of total employes. Total monthly rent, \$856; average, \$8. Total annual rent, \$10,272; average, \$96. Per cent of rent to earnings, .18+. Per cent of rent to expenses, .19-. Total monthly rent of Americans, \$654; average, \$8.27; Canadians, \$23; average, \$7.67; Englishmen, \$54; average, \$7.55; Germans, \$73; average, \$6.08; Irishmen, \$45; average, \$9; Finlander, \$7; average, \$7.

Number of employes boarding, 101, which is 31+ per cent of total. Eighteen employes live at home and give wages to parents; three live at home and pay no stated amount for board; two live at home and support family. Total weekly board, \$371.85; average, \$3.68; Americans, 80; total, \$295.10; average, \$3.69; Canadians, 6; total, \$22.50; average, \$3.75; Englishmen, 6; total, \$22.50; average, \$3.75; Germans, 5; total, \$17.75; average, \$3.55; Polanders, 2; total, \$6.50; average, \$3.25; Swede, 1; total, \$3.50; Scotch, 1; total, \$4. Thirty-two employes keep an itemized account of their expenses, which is 10+ per cent. One hundred and forty-six own sewing machines, which is 76+ per cent of those supporting families. Seventy-eight own musical instruments, which is 24+ per cent. Number of musical instruments: Pianos, 14; organs, 30; violins, 8; guitars, 7; cornets, 5; horns, 4; melodeons, 6; trombones, 2; banjo, 1; clarinet, 1; flute, 1; accordians, 3. Number who take newspapers and magazines, 249: Americans, 191; Canadians, 13; Englishmen, 13; Irishmen, 6; Germans, 20; Hollander, 1; Polanders, 1; Swede, 1; Scotchman, 1; Finlander, 1; Swiss, 1. 77+ per cent take newspapers, of which 76+ per cent are Americans. Number of dailies taken, 303; story, 18; sporting, 8; religious, 20; labor, 5; scientific, 8; local and other weekly papers, 78; magazines, 21.

One hundred and seventy-five work at hand and 113 at machine work and 33 at both. Sixty men or 19+ per cent have been injured since engaged as employes. Twelve reported that their labor organization had been of financial benefit to them and five no financial benefit. Other than financially, three reported that their labor organization had been of benefit educationally, one socially and two no benefit. Seventy-one carry life insurance amounting to \$118,575; average, \$1,670.07; Americans, 48, total, \$87,500; average, \$1,822.91; Canadians, 5; total, \$8,000; average, \$1,600; Englishmen, 3; total, \$5,100; average, \$1,700; Germans, 10; total, \$11,700; average, \$1,170; Irishmen, 3; total, \$5,000; average, \$1,666.66; Polanders, 1; total, \$675; Swiss, 1; total, \$800. 22+ per cent are insured. Two hundred and ten belong to benefit societies: Americans, 149; total, \$380.50; average, \$6.58; Canadians, 11; total, \$67; average, \$6.09; Englishmen, 16; total,

\$110; average, \$6.88; Germans, 22; total, \$150; average, \$6.82; Irishmen, 6; total, \$48; average, \$8; Hollander, 1; total, \$6; Polanders, 3; total, \$18; average, \$6; Scotchman, 1; total, \$6; Swiss, 1; total, \$4. Total weekly benefit, \$1,389.50; average, \$6.62. 65+ per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
ALBION.

TABLE No. 8.—*Showing Individual Reports*

Occupation.	Age.	Nativity.		Married or single.	Families.					me.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.		
THE GALE M'FG. CO.													
Molder	36	U. S.	U. S.	m	5	5	3		6	42	10	shut down & sh't h's	
"	28	"	"	m	1	1	1		2	47	5	"	
"	57	"	"	wr	4					28	24	short hours & burned	
"	29	"	"	s						36	16	short h's & no work	
"	33	"	"	m	2	2	1	1	4	43	9	shut down & sh't h's	
"	34	"	"	m	1	1	1		2	39	13	no work & short h's	
"	18	"	"	s						43	9	"	
"	46	"	"	m	2	2			3	41	11	shut down & sh't h's	
"	25	"	"	m					1	36	16	no work & short h's	
Laborer	22	"	Germany	m					1	49	3	short hours	
Blacksmith helper	28	"	U. S.	m	1	1			2	49	3	"	
Blacksmith	39	"	"	m	2	2	1		3	49	3	"	
"	52	"	"	m	7	3	2		4	49	3	"	
Blacksmith helper	48	"	"	m	4	3	1		4	47	5	laid off and short h's	
Machinist	28	"	"	m	1	1			2	49	3	short hours	
Grinder	32	Germany	Germany	s						36	16	no work & short h's	
Blacksmith helper	34	U. S.	U. S.	m					1	36	16	"	
Machine hand	42	Germany	Germany	m	7	7	4		8	49	3	short hours	
"	21	U. S.	U. S.	s						49	3	"	
Steel worker	20	Germany	Germany	s						49	3	"	
"	24	Switz.	Switz.	m					1	49	3	"	
"	22	U. S.	U. S.	s						41	11	no work & short h's	
"	22	Germany	Germany	s				2	2	42	10	sick and short hours	
Molder foreman	39	Ocean		wr	2	2	2		2	49	3	short hours	
Molder	31	U. S.	U. S.	m	1	1	1		2	49	3	"	
"	40	"	"	m					1	36	16	sick and short hours	
"	24	"	"	s						45	7	shut down & sh't h's	
"	35	"	"	m	1	1	1		2	43	9	"	
Laborer	54	"	Ireland	m	1				1	43	9	"	
Molder	26	"	Germany	m					1	46	6	"	
"	30	Germany	"	s						44	8	no work & short h's	
"	23	"	U. S.	s						43	9	"	
"	28	"	Ireland	m					1	49	3	short hours	
Laborer	36	"	U. S.	m					1	49	3	"	
"	21	"	"	s						49	3	"	
"	52	Denmark	Denmark	m	5	2	1		3	49	3	"	
"	35	U. S.	England	m						1	49	3	"
Painter	52	"	U. S.	m	2	2			3	43	9	shut down & sh't h's	
"	42	"	"	m	1	1	1		2	37	15	"	
"	32	"	"	m	1	1			2	43	9	"	
"	41	"	"	m	3	3	2		4	36	16	short h's & sickness	
"	31	"	"	s						43	9	sh't h's & shut down	
"	46	"	"	m					1	47	5	short h's & sickness	
"	38	"	"	m	2	2	1	1	4	41	11	sh't h's & shut down	
"	46	"	"	wr	2	2			2	43	9	"	
Foreman of paint shop	40	"	"	m					1	49	3	short hours	
Pattern maker	43	"	"	m				1	2	47	5	short hours & accid't	
"	31	Germany	Germany	s						45	7	sh't h's & shut down	

of the Employés Canvassed in Albion.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payment on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$14 00	\$588 00		\$588 00	\$475	\$725	\$600	\$100									\$400
14 50	681 50		681 50	425				\$250	\$5 50							400
12 00	836 00		836 00					100		\$4 00						100
15 00	540 00		540 00							8 50						1200
15 00	645 00		645 00	475	1600	600	150				\$2000					
7 50	292 50		292 50	292					6 50							200
7 50	322 50		322 50													
12 00	492 00	\$300	692 00	400				50	8 50		2000					500
12 00	432 00		432 00	300	1200	200	150	50								1200
8 50	416 50		416 50	400					6 00							200
7 50	367 50		367 50	360					4 50							200
10 50	514 50		514 50	450	1600	600		50			2000					1800
12 00	598 00		598 00	300	2000	200	250				5000	1	\$3 00			2000
7 50	353 50	150	503 50	450	1500	500	50									1500
9 50	465 50		465 50	315				150	6 00							500
9 00	324 00		324 00							3 00					7	25
7 50	270 00	300	570 00	200	6000			400	10 00		2000					6500
9 00	441 00	300	741 00	700	1500	400					2000				35	1600
9 00	441 00		441 00							3 00						50
9 50	466 50	42	507 50					165	2 00						\$15	800
9 00	441 00		441 00	400					6 00							
7 50	307 50		307 50							3 00		1	2 00		8	25
9 00	378 00		378 00	375						†					4	75
28 00	1127 00		1127 00	1000	2000			200			2000					2700
12 00	588 00		588 00	450				100	6 50		2000					600
12 00	432 00		432 00	252	2500			200			2000					3500
12 00	540 00		540 00					150		3 50	1000	1	7 50			800
12 00	516 00		516 00	450				50	8 50		2000					500
7 50	322 50		322 50	200	1500	750	120									1000
12 00	552 00		552 00	400	1500	100		100								1600
12 80	554 40		554 40							3 50					30	50
9 00	387 00		387 00					110		5 00						200
9 00	441 00		441 00	350				50	8 00		2000	1	2 00		7	1400
12 00	588 00		588 00	375	1400	200	200				2000					
7 50	367 50		367 50						4 00							50
12 00	588 00		588 00	460	1600	900		100			2000				31	1000
10 00	490 00	95	585 00	455	1000			95								3000
9 00	387 00		387 00	350					14 00			1	15 00			250
8 40	310 80		310 80	310					8 00		2000					350
9 00	387 00		387 00	387					free		1000					100
9 00	324 00		324 00	324	500	140										1000
9 00	387 00		387 00					100								200
8 10	380 70		380 70	380					5 00							100
12 00	492 00		492 00	400					free		2000					200
12 00	516 00	75	591 00	500	1200						2000					1800
16 50	808 50		808 50	500				200	9 00							900
12 00	846 00		846 00	600	5000		200				2000					6000
9 00	406 00		406 00							8 50					7	100

* Lives at home and gives wages to parents.

† Lives at home and supports family.

TABLE No. 8.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Core maker	45	U. S.	U. S.	m	1				1	43	9	short h's & shut down
"	16	"	Germany	s						49	8	short hours
Molder	25	"	Ireland	s						39	12	short h's & shut down
"	26	Canada	England	m	2	2				43	9	"
"	31	U. S.	Germany	m				1	2	43	9	"
"	38	"	U. S.	m	3				1	43	9	"
"	40	"	"	m	4	4	2		5	43	9	"
"	33	"	"	s	2	2				43	20	short h's & no work
"	29	Canada	Scotland	m	2	2	1		2	43	10	short h's & shut down
"	34	U. S.	U. S.	m	1	1	1		2	45	7	"
"	37	"	"	m	2	2			3	43	9	"
"	25	"	Germany	s						37	15	"
"	37	"	U. S.	s					1	43	9	"
"	40	Germany	Germany	m	6	5	5		6	43	9	"
Grinder	18	"	"	s						49	8	short hours
Fitting plows	28	U. S.	U. S.	m				1		36	16	short h's & no work
"	30	Germany	Germany	m					1	49	8	short hours
Laborer	35	"	"	m	3	3		2	6	44	8	short h's & no work
Grinder	31	"	"	m	2	2		1	4	45	7	"
Blacksmith	37	U. S.	U. S.	m				1	2	43	9	short h's & shut down
Wood worker	37	"	Germany	m	1	1	1		2	41	11	short h's & no work
Foreman—wood worker	47	"	U. S.	m	1	1			1	49	8	short hours
Grinder	31	Germany	Germany	m	4	4			5	49	8	"
Buffer	28	"	"	m	4	4	1		5	49	8	"
Fitting plows	31	"	"	m	2	2			3	43	9	short h's & shut down
Wood worker	37	U. S.	England	m					1	37	15	short h's & laid off
Fitting plows	28	Germany	Germany	m	2	2			3	49	8	short hours
"	19	"	"	m					1	44	8	shut down & short h's
"	23	"	"	s						49	8	short hours
Grinder	22	"	"	s				2	2	49	3	"
Buffer	33	"	"	m	3	3	2		4	43	9	short h's & shut down
"	36	"	"	m	7	7	5	1	9	49	3	short hours
"	31	U. S.	"	m	3	3	1		4	41	11	short h's & no work
"	17	"	"	s					1	43	9	"
Machine hand	30	Canada	Canada	m	6	6	5		7	49	3	short hours
Foreman, steel works	58	Scotland	Scotland	m					1	49	3	"
Laborer	21	U. S.	U. S.	s					1	49	2	"
Machinist	19	Germany	Germany	s						43	9	short h's & shut down
Blacksmith	59	U. S.	U. S.	s	1	1	1		2	36	16	short h's & no work
Laborer	45	"	"	s						41	11	short hours & sick
Machinist	15	Canada	Canada	s						22	20	short h's & first work
Steel worker	23	U. S.	U. S.	m					1	49	3	short hours
Machinist	24	Canada	Canada	s					1	49	3	"
Molder	21	U. S.	U. S.	s				1	1	43	9	short h's & shut down
Laborer	26	Germany	Germany	m					1	49	8	short hours
Buffer	29	"	"	m	7	6	3		7	49	3	"
"	26	"	"	m	5	5	2	2	8	47	5	short h's & laid off
"	43	"	"	m	7	6	3		7	40	3	short hours
"	28	U. S.	U. S.	m					1	48	4	"
Polisher	33	Germany	Germany	m	2	2			3	49	3	"
Grinder	52	"	"	m	6	3	2		4	36	3	short hours & first work in U. S.
"	37	"	"	m	2	2			3	49	3	short hours
"	34	"	"	m	4	4	1		5	49	3	"

TABLE No. 8.—CONTINUED.—*Showing Individual Reports.*

Income.				Total annual income.	Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	If owning home, its value.			If in debt on home, am't.	Amount paid on home during year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.				
\$8 37	\$359 81		\$359 91	\$300				\$50	\$7 50	\$2 00	\$2000					\$900	
6 00	294 00		294 00							4 00						100	
12 00	468 00		468 00													50	
12 50	580 50		580 50	280				250	9 00		2000	1	\$3 60			400	
12 50	580 50		580 50	450	\$600	\$175	\$180				1000	1	2 00			800	
12 00	516 00		516 00	516	1800	750					2500					1500	
12 00	516 00		516 00	516					6 50		2000					500	
12 00	384 00		384 00							8 50							
12 00	504 00	\$30	524 00	400				100	5 00		2000			10		700	
12 00	540 00		540 00	380	1200	500	150				2000					1000	
13 50	580 50		580 50	550					8 50							100	
9 00	393 00		393 00					125		8 00						900	
12 00	541 80		541 80	300	1400			290			2000					2000	
12 00	516 00		516 00	350	1000	300	75	*		*	2000			23		1000	
7 50	367 50		367 50											9			
7 50	370 00		370 00	250					4 00							100	
9 00	441 00		441 00	290				150	6 00					23		200	
7 50	330 00		330 00	300	600	250								8	\$25	850	
9 00	405 00		405 00	300				100	5 00					1 1/2		100	
9 00	367 00		367 00	367					6 00							100	
10 50	480 50	65	496 50	375	1400			100								3000	
12 00	582 00	200	1082 00	600	2000			400			1000					4500	
8 50	416 50		416 50	400	800	400								6		500	
9 75	477 75		477 75	400	725	300	50							9 1/2		500	
9 00	367 00		367 00	367					6 00					9		200	
11 00	407 00	30	437 00	300	2000			100								2600	
12 00	588 00		588 00	480	600	50	150							10		1500	
8 25	368 00		368 00	288				75	2 00					17		100	
9 00	441 00		441 00					100		8 00				4	50	100	
8 00	392 00		392 00	362						†				1/2			
9 00	367 00		367 00	325	600	400	30				2000			8		300	
9 00	441 00		441 00	475	600	300					2000			13		500	
8 25	336 25		336 25	300					10 00							250	
7 50	322 50		322 50					10		4 50							
12 00	582 00	150	1032 00	650	1800	900	100	200			2000			13	150	2300	
12 00	582 00		582 00	550	1500			300						34		3600	
7 50	367 50		367 50	300					5 00							200	
9 00	367 00		367 00					25		2 50				16		100	
15 00	540 00		540 00	500					8 50							250	
9 00	369 00		369 00							8 50						50	
8 00	96 00		96 00					*		*							
12 00	588 00		588 00	300	1600		450									2600	
12 50	661 50		661 50	400				250	8 50		2000			10		270	
7 50	322 50		322 50	322						†	1000					100	
8 25	404 25		404 25	235				75	free							200	
8 25	404 25		404 25	400					4 00							150	
8 25	367 75		367 75	285	800	300	100				2000			9		900	
9 00	441 00	125	566 00	550	800						1000			17		1000	
9 00	432 00		432 00	383	600	400	180	50								500	
9 00	441 00	150	591 00	550					5 00					1 1/2		100	
7 00	161 00		161 00	268				50	5 00					1/2			
7 50	367 50	60	427 50	300	800	350	100							8	280	500	
9 00	441 00		441 00	350	700	300	25							7		700	

† Lives at home and supports family.

* Lives at home and gives wages to parents.

TABLE No. 8.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Varnisher	44	Germany	Germany	m	7	7	3		8	46	6	short h's & laid off short hours
Grinder	30	"	"	m	3	3			4	49	2	
Laborer	33	"	"	m	4	4	2		5	49	2	
Machine hand	26	U. S.	"	m	1	1			2	49	2	
"	51	Germany	"	m	6	6	2		7	49	2	"
Laborer	42	"	"	m	2	2	1		3	49	3	"
Riveter	30	U. S.	U. S.	m	1	1			2	49	2	"
Laborer	32	"	"	m	1	1			2	49	3	"
Foreman grinding room	49	Germany	Germany	m	6	1	1		2	49	3	"
Carpenter and joiner	61	U. S.	U. S.	m	4				1	49	3	"
Plow jointer	34	"	Germany	m	3	3	2		4	49	3	"
ALBION MAL. IRON CO.												
Molder	22	"	U. S.	s						26	26	no work
"	16	Germany	Germany	s						48	4	"
"	18	U. S.	U. S.	s						36	16	accident
"	15	"	Germany	s						39	13	no work
"	16	Germany	"	s						49	8	"
Core maker	16	U. S.	U. S.	s						43	9	at school
"	15	Germany	Germany	s						17		first work in U. S.
"	15	U. S.	U. S.	s						48	4	no work
"	16	Germany	Germany	s						23		first work
"	18	U. S.	U. S.	s						26	26	no work
"	16	"	"	s						39		first work
"	15	Germany	Germany	s						30		"
Laborer	18	"	"	s						48	4	no work
Molder	23	U. S.	U. S.	s				1	1	50	2	sick
Laborer	16	"	Germany	s						33	19	at school
Molder	20	"	U. S.	s						48	4	no work
"	19	"	"	s						26	26	"
"	18	"	"	s						52		"
"	19	"	Germany	s						40	12	no work and sick
"	19	"	U. S.	s						52		"
"	21	"	Ireland	s						52		"
"	17	"	U. S.	s						53		"
"	18	"	"	s						48	4	burned
"	23	Germany	Germany	s						24		first work in U. S.
"	24	"	"	s			1	1	1	50	2	voluntarily
Pattern maker	28	"	"	s						49	3	no work
Molder	26	U. S.	U. S.	s						42	10	"
"	25	Germany	Germany	s						39	13	sick
"	29	"	"	s						26		first work in U. S.
"	22	U. S.	U. S.	s						48	4	no work
"	21	"	"	s						44	8	"
"	26	Ireland	Ireland	s						39	13	"
Laborer	52	U. S.	U. S.	wr	3	3	3		3	39	13	"
"	33	Germany	Germany	m	3	3			4	39	13	"
"	42	"	"	m	5	5	3		6	49	3	"
"	47	"	"	m	7	7	4		9	42	10	sick
Molder	31	U. S.	U. S.	m	1	1	1		2	53		"
"	36	Germany	Germany	m	1	1			2	44	8	no work
Pattern maker	28	"	"	m	2	2			2	52		"
"	29	"	"	m	1	1			2	44	8	out of work

TABLE No. 8.—CONTINUED.—*Showing Individual Reports.*

Income.				Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.	Annual family expenses.	If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.	
\$0 00	\$414 00	\$50	\$464 00	\$450					\$5 00					\$300
0 00	441 00		441 00	441					5 00					100
0 50	465 50		465 50	450	\$500	\$200								500
0 00	393 00		393 00	393										140
0 25	404 25		404 25	404	800				5 00		\$2000			1000
9 00	441 00		441 00	400	1500	200	\$30							1400
9 00	441 00	150	591 00	500	5000	1400		\$200	8 00					3800
10 50	514 50		514 50	875	800			125	6 00					725
15 00	735 00		735 00	635	1000			100			2000			1500
10 50	514 50		514 50	400	8000	450		100						3300
8 00	392 00		392 00	880	800	70	55				3000			350
9 00	234 00		234 00						†					200
3 00	144 00		144 00					*	*					
5 00	186 00		186 00					*	*					
8 00	312 00		312 00					*	*					
3 00	147 00		147 00					*	*					
4 50	193 50		193 50					*	*					
3 00	51 00		51 00					*	*					
8 00	144 00		144 00					*	*				4 mo	
3 08	66 80		66 80					*	*				8	
3 08	78 00		78 00					*	*					
4 50	175 50		175 50					*	*					
3 00	90 00		90 00					*	*					
8 40	403 20		403 20		900	100			\$3 00	2000			13	500
6 00	300 00		300 00						3 00				4	300
6 00	198 00		198 00											
7 50	360 00		360 00						2 00					80
8 00	208 00		208 00					50	2 50			1	\$3 00	100
9 00	468 80		468 80					100	free					700
7 50	300 00		300 00					50	3 00					100
3 00	156 00		156 00					50	free					100
7 00	364 00		364 00					50	3 00					100
7 50	390 00		390 00						3 00					
7 50	390 00		390 00						2 00					125
5 00	120 00		120 00						2 00					40
8 50	425 00		425 00						4 00					50
15 00	735 00		735 00					50	3 00				8	150
7 50	315 00		315 00						2 00					50
9 00	351 00		351 00						3 50				3	50
9 00	234 00		234 00						3 00				1/2	40
10 00	480 00		480 00						2 50					100
10 50	462 00		462 00						3 50					50
12 00	468 00		468 00						3 50			1	5 00	75
9 00	351 00		351 00	350					6 00					500
8 40	327 60		327 60	225	625	500	100						5	250
8 40	411 60		411 60	300	900	500	100						23	600
8 40	352 80		352 80	400	800								17	1000
7 00	364 00		364 00	250	700	500	100					1	2 00	500
7 50	390 00		390 00	275	400	200	50						7	400
13 00	936 00		936 00	800	700	550	100						9	500
13 50	594 00		594 00	550					7 00				12	100

* Lives at home and gives wages to parents. † Lives at home and pays no stated amount for board.

TABLE No. 8.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	31	U. S.	U. S.	m	2	2	1		3	39	13	accident
Laborer	22	"	"	m	1	1			2	50	2	no work
Blacksmith	51	Canada	"	m	1				1	52		
Foreman	24	U. S.	"	m	1	1			2	26	26	no work
Laborer	27	"	"	m	3	3		1	5	52		
Molder	29	"	"	m					1	44	8	sick
Laborer	38	Ireland	Ireland	m					1	26	26	no work
Fireman	36	U. S.	U. S.	m	1	1	1	1	2	43	9	"
	40	"	Germany	m	3	3	2		4	44	8	"
ALBION MFG. CO.												
Wood worker	19	"	U. S.	s						44	8	"
Painter	33	"	England	s				2	2	44	8	shut down
	22	Canada	Ireland	s						52		
Laborer	21	U. S.	U. S.	s				1	1	48	4	shut down
Painter	27	"	Ireland	s				2	2	39	13	laid off
"	30	"	U. S.	s						52		
"	19	"	Ireland	s				2	2	44	8	shut down
Wood worker	29	"	U. S.	m	1	1			1	52		
"	25	"	"	m	1	1			2	50	2	no work
"	60	"	"	wr	1					52		
Foreman	35	"	"	m	2	2	1		3	52		
Wood worker	44	Germany	Germany	m	3	2	2		3	52		
"	31	U. S.	U. S.	m	1	1			2	35	17	no work
"	32	"	"	m	2	2	2		3	52		
"	39	"	"	m	2	2	2		3	52		
Foreman	36	"	"	m	1	1	1		2	49	3	shut down
Blacksmith	50	"	"	m	2	2	1		3	48	4	no work
Buffer	29	"	"	m	1	1			2	42	10	sick and no work
Foreman	37	Canada	Ireland	m	5	5	4		6	50	2	shut down
Painter	25	U. S.	Germany	m					1	50	2	no work
"	25	Germany	"	m	2	2			3	50	2	no work
"	32	U. S.	U. S.	m	1	1			2	43	9	shut down
"	31	"	"	m					1	39	13	"
"	44	"	"	m					1	43	9	no work
"	33	"	"	m	2	2	2		3	48	4	shut down
Laborer	29	Germany	Germany	m	2	2		1	2	52		
Foreman	35	U. S.	U. S.	m	4	4	3		5	52		
Wood worker	36	"	"	m	2	2	2		3	35	17	no work
UNION WIND MILL AND MFG. CO.												
Core maker	23	U. S.	"	s						48	4	short hours & no work
Molder	37	"	"	s						37	15	"
"	25	"	"	s						32	20	"
Blacksmith	35	"	"	m	1	1	1		2	42	10	"
Painter	29	"	"	m	2	2			3	24	28	"
Engineer	33	"	"	m	2	2	1		3	50	2	"
Machinist	25	"	"	s				1	1	48	4	short hr's, laid off wry
Machine hand	62	"	"	m	4	1			2	37	15	short hours & no work

TABLE No. 8.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$13 50	\$526 50		\$526 50	\$226	\$3000	\$200	\$300					1	\$2 00			\$4000
8 40	420 00		420 00	400	420 00	400	450									800
12 00	624 00		624 00	600	600	3000					\$2000	1	\$ 00	24		800
9 00	234 00		234 00	200												75
9 00	468 00	\$55	523 00	400				\$100	\$8 50							1500
10 00	440 00		440 00	325	550	375	100				1000	1	2 00			550
12 00	312 00		312 00	312					10 00							2500
9 00	387 00		387 00	387					7 00					18		300
12 00	528 00	20	548 00	500					10 00		2000					300
7 50	330 00		330 00					50								100
9 00	396 00		396 00	312												50
9 00	468 00		468 00					150	\$3 00					10		200
9 00	432 00		432 00	432				15	3 25							125
9 60	374 40		374 40													
9 60	499 20		499 20		1300	600		100	3 50	2000						750
9 00	396 00		396 00						3 25							50
9 00	499 20		499 20	350				125	6 50	2000						300
9 60	480 00		480 00	400				60	6 50							250
10 00	520 00		520 00						5 00	2000						150
12 00	624 00	100	724 00	450	1100	400		250			2000					1500
9 00	468 00		468 00	400	800									17		1000
9 60	336 00		336 00	300					6 00							200
9 60	499 20	48	547 20	450	800			30			1000	1	2 00			1000
9 60	499 20		499 20	474	900	400		25			2000					600
12 00	588 00		588 00	388	1400	400	250				3000	1	2 00			1500
10 50	504 00	48	552 00	400				100	8 50							800
9 00	378 00	170	548 00	450				40	5 00		1000	1	2 00			350
15 00	750 00		750 00	600	1400	500	100							10	\$25	2500
9 00	450 00		450 00	225	800	300	100	100			2000					700
9 00	450 00		450 00	250	1000	350	175							8		1000
10 50	451 50		451 50	451	500	200			6 50		2000					800
9 60	374 40		374 40	374					8 50		2000					500
9 60	412 80		412 80	411					5 00		2000					200
12 00	576 00		576 00	576					8 50							500
9 00	468 00		468 00	350	500	380		100			2000			9		800
12 00	624 00		624 00	550	500		20				2000					800
9 60	336 00	240	576 00	325	3000	800		200			2000					2500
8 00	288 00		288 00					35		2 00						75
12 00	444 00		444 00						†			1	6 00			150
13 50	432 00		432 00						3 50			1	7 00			100
9 00	378 00		378 00	298	750	270	30	50			1000	1	2 00			550
9 00	216 00		216 00	216	2000						2000	1	2 00			8500
9 00	450 00		450 00	345	1500	700	5	100								2200
9 00	432 00	150	582 00	582						†						
10 80	399 60		399 60	350				25	8 50							300

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

ALBION.

One hundred and ninety-seven employées were canvassed: Union Windmill and Manufacturing Co. (manufacturers of windmills, tanks and pumps), 8; Albion Manufacturing Co., 28; Albion Malleable Iron Co. (manufacturers of malleable iron), 49; Gale Manufacturing Co. (manufacturers of plows), 112.

Nationality: Americans, 128; Germans, 55; Irishmen, 2; Canadians, 8; Swiss, 1; Dane, 1; born on the ocean, 1; Scotchman, 1. 65- per cent are Americans and 35+ per cent foreigners. Of the foreigners 80- per cent are Germans, 12- per cent Canadians, 3- per cent Irishmen and 1+ per cent each Swiss, Dane, Scotch and born on the ocean. Percentage of those born in the United States: American, 104; German, 15; Irish, 6; English, 3. 81+ per cent have American and 19- per cent foreign parents. One hundred and twenty-three are married, 69 single and 5 widowers. 62+ per cent are married, 35- per cent single and 3- per cent widowers. There are employed three boys 15 years of age and none younger. Fifty-nine support self only, 5 support others than self by boarding and 133 support families: Americans, 85; Germans, 37; Canadians, 6; Swiss, Scotch, Irish, Dane and on the ocean, 1 each. In 133 families there are 267 children, of whom 227 are supported. Twenty-two married men have no children: 15 or 68+ per cent are Americans, 4 are Germans, 1 Irishman, 1 Canadian, 1 Scotchman. Of the children supported 74 are under 5 years of age, 152 are 5 years of age and under 20 and on over 20. One hundred and seven attend school, which is 70+ per cent of school age. One hundred and six attend the public schools and one a select school. Number of persons supported in families, 372; by boarding, 7. Twenty-five employées support 3 persons besides wife and children. Total number of weeks worked during the year, 8,653; average, 43.9+. One hundred and seventy-three men, or 91- per cent, lost 1.41 weeks, or 27 years and 7 weeks. Cause of lost time: Short hours and no work, 24; short hours, 49; short hours and shut down, 32; short hours and sickness, 6; short hours and laid off, 4; no work, 36; accident, 5; sickness, 4; at school, 2; sickness and no work; shut down, 7; vacation, 1; laid off, 1.

Total annual earnings, \$84,499.81; average, \$428.42. Total income from other resources, \$2,993, as follows: Family earnings, \$825; boarding, \$450; pensions, \$363; interest, \$21.41; rent, \$893; other sources, \$250. Total annual earnings of Americans, \$54,155.46; average, \$423.09; Germans, \$21,960.35; average, \$399.28; Canadians, \$4,566; average, \$570.75; Irishmen, \$780; average, \$390; Swiss, \$441; average, \$441; Scotchman, \$682; average, \$882; Dane, \$588; average, \$588; on the ocean, \$1,127; average, \$1,127. Average weekly wages of married men, \$10.58; single men, \$7.99; all employées, \$9.67. Wages paid per week: Nine employées, \$3 each; two, \$4.50; two, \$5; four, \$6; three, \$7; twenty-two, \$7.50; five, \$8; one, \$8.10; six, \$8.25; one, \$8.37; six, \$8.40; three, \$8.50; fifty-one, \$8.75; three, \$9.50; ten, \$9.60; one, \$9.75; four, \$10; seven, \$10.50; one, \$10.80; one, \$11; thirty-one, \$12; two, \$12.60; seven, \$13.50; one, \$14; one, \$14.50; six, \$15; one, \$16.50; five, \$18.00; one, \$23.

Total family expenses, \$52,668; per capita, \$104.29; Americans, \$32,218; per capita, \$121.12; Germans, \$14,748; per capita, \$74.09; Canadians, \$2,980; per capita, \$110.75; Irishmen, \$312; per capita, \$156; Swiss, \$400; per capita, \$200; Scotchmen, \$550; per capita, \$275; Danes, \$460; per capita, \$115; on the ocean, \$1,000; per capita, \$333.33.

Number owning homes, 75; Americans, 44; Germans, 25; Canadians, 3; on the ocean, 1; Scotch, 1; Dane, 1. Seventy-one married men, two single men and two widowers own homes. 57+ per cent of married men own homes. 59- per cent of home owners are Americans and 41+ foreigners. Total value of homes, \$101,025; average, \$1,346.66; Americans, \$69,775; average, \$1,585.79; Germans, \$19,950; average, \$798; Canadians, \$200; average, \$2,066.66; Scotchman, \$1,500; average, \$1,500; Dane, \$1,600; average, \$1,600.

on the ocean, \$2,000; average, \$2,000. The homes of 53 employes are mortgaged, which is 71- per cent. Value of mortgaged homes, \$62,325; mortgaged for \$21,510, which is 35- per cent of valuation. The homes of 30 Americans are mortgaged for \$13,080; 20 Germans, \$6,130; 2 Canadians, \$1,400; 1 Dane, \$900. During the year 36 employes made payments or improvements upon homes amounting to \$4,345, and 70 men saved \$8,010 in money. Total number of employes who saved, 99, which is 50+ per cent. Total savings, including payments and improvements upon homes, \$12,355, which is 14+ per cent of total earnings. Total present worth of 169 employes (28 not reporting), \$142,970; average, \$845.97; Americans, 109; total, \$99,795; average, \$915.55; Germans, 47; total, \$23,630; average, \$502.76; Canadians, 7; total, \$9,570; average, \$1,367.14; Irishmen, 2; total, \$2,575; average, \$1,287.50; Swiss, 1; total, \$200; on the ocean, 1; total, \$2,700; Scotchman, 1; total, \$3,500; Dane, 1; total, \$1,000. One employe is worth \$6,000 and one \$6,500. Ten Germans had \$695 upon arrival in this country; 2 Canadians, \$175; 1 Swiss, \$25. Total present worth of foreigners, \$43,175.

Number renting homes, 54: Americans, 39; Germans, 10; Canadians, 3; Swiss, 1; Irishman, 1. One renter is a single man, one a widower and four have rent free. 42+ per cent of married men and 27- per cent of total employes rent. Total monthly rent, \$373.50; average, \$6.91. Total annual rent, \$4,482; average, \$33.19. Per cent of rent to earnings, 19+. Per cent of rent to expenses, 21+. Total monthly rent of Americans, \$25; average, \$7.30; Germans, \$50; average, \$5; Canadians, \$22.50; average, \$7.50; Irishmen, \$10; average, \$10; Swiss, \$6; average, \$6.

Number of employes boarding, 46, which is 23+ per cent of total. Fourteen live at home and give wages to parents, four live at home and support family, two live at home and pay no stated amount for board. Total weekly board, \$139; average, \$3.02; Americans, 32; total, \$96.50; average, \$3.01; Germans, 12; total, \$36; average, \$3; Canadian, 1; total, \$3; Irishman, 1; total, \$3.50. Sixteen employes keep an itemized account of their expenses, which is 8+ per cent. One hundred and one own sewing machines, which is 76- per cent of those supporting families. Seventy own musical instruments, which is 35+ per cent. Number of musical instruments: Pianos, 7; organs, 22; violins, 24; cornets, 4; banjos, 3; accordions, 7; clarionets, 2; horns, 3; fife, 1; drums, 2; flute, 1; guitars, 2; melodeons, 2. Number of employes who take newspapers and magazines, 135: Americans, 95; Germans, 30; Canadians, 6; Scotch, Swiss, Dane and on the ocean, one each. 69- per cent take newspapers and magazines, of which 70- per cent are Americans. Number taking dailies, 88; story, 17; religious, 5; labor, 1; local and other weekly papers, 103; magazines, 11.

One hundred and thirty-six work at hand and 51 at machine work and 10 at both. Twenty-seven men, or 14- per cent have been injured since engaged as employes. Seven reported that their labor organization had been of financial benefit to them and one no financial benefit. Fifty-nine carry life insurance amounting to \$114,500; average, \$1,940.67; Americans, 43; total, \$81,500; Germans, 10; total, \$19,000; Canadians, 4; total, \$10,000; on the ocean, 1; total, \$2,000; Dane, 1; total, \$2,000. 30- per cent of employes are insured. Twenty-one belong to benefit societies: Americans, 17; total, \$63.50; average, \$3.73; Canadians, 2; total, \$4; average, \$2; Irishmen, 2; total, \$12; average, \$6. Total weekly benefit, \$79.50; average, \$3.64. 11- per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
COLDWATER.

TABLE No. 9.—Showing Individual Reports

Occupation.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.		
	Age.	Where born (country).		Nativity of parents.	No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.		No. of weeks worked.	No. of weeks lost.
COLDWATER ROAD CART CO.												
Painter	18	U. S.	U. S.	s						31	21	out of work
"	19	"	"	s						39	18	laid off and sick
"	37	"	"	s						43	9	laid off
"	20	"	"	s						39	13	sick
"	26	"	"	s						39	13	laid off
"	36	"	"	s				1	1	35	17	sick and laid off
Iron worker	21	Germany	Germany	s						35	17	laid off and out of work
Laborer	24	U. S.	U. S.	s						46	6	laid off
"	22	Germany	Germany	s						35	17	out of work
Iron worker	17	U. S.	U. S.	s						35	17	sick and out of work
"	16	"	"	s						39	13	laid off and accident
"	22	Russia	Russia	s						16		first work in U. S.
"	20	U. S.	U. S.	s						43	9	vacation
"	20	"	"	s						51	1	"
Blacksmith	20	"	"	s						46	6	laid off
"	21	"	"	s						43	9	out of work
"	19	"	"	s						39	13	laid off
Crater	23	"	"	s				2	2	47	5	"
"	22	"	"	s						39	13	"
Blacksmith	34	"	"	s						35	17	sick and laid off
Wood worker	16	"	Germany	s						40	12	"
"	19	"	Ireland	s						39	13	laid off and vacation
Polisher	16	"	U. S.	s						37	15	at school & out of work
"	18	"	"	s						48	9	laid off
Wood worker	16	"	"	s						13	39	at school
Iron worker	19	"	"	s						35	17	out of work
Wood worker	16	"	"	s						39	13	"
"	19	"	"	s						18	34	"
"	23	"	"	s						39	13	laid off
"	21	"	"	s						44	8	sick and laid off
"	20	"	"	s						50	2	laid off
"	20	"	"	s						40	12	out of work
"	18	"	"	s						51	1	laid off
"	20	"	Germany	s						47	5	"
"	18	"	U. S.	s						46	6	"
"	20	"	Germany	s						44	2	"
"	17	"	U. S.	s						43	9	"
Painter	15	"	"	s				2	2	39	13	sick
"	26	"	"	s						25	17	out of work and sick
"	23	"	"	s						49	8	laid off
Iron worker	26	"	"	m	1	1			2	40	12	out of work
Teamster	40	"	"	m	3	3	3		4	48	4	laid off
Iron worker	28	"	"	m					1	39	13	sick and laid off
"	25	"	"	m					1	48	4	laid off
"	35	"	"	m	2	2	2	1	4	51	1	"
Driller	30	"	"	m	2	2			3	26	26	out of work
Blacksmith	30	"	Ireland	m	2	2			3	40	12	"
Iron worker	32	"	U. S.	wt	3	3	1		3	52		

of the Employes Canvassed in Coldwater.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am t.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness.			
\$6 00	\$186 00		\$186 00							\$3 00						\$100
6 00	234 00		234 00					\$50		3 50						300
10 00	430 00		430 00					60		3 50						
7 50	292 50		292 50							3 00						150
13 00	468 00		468 00					100		3 00						
9 00	315 00		315 00	\$315					\$8 00							75
6 00	210 00		210 00							2 50						200
7 50	345 00		345 00							3 00						100
7 50	352 50		352 50							3 00						125
4 00	140 00		140 00							2 00						
6 00	234 00		234 00							2 50						50
5 00	90 00		90 00							3 00						50
5 00	215 00		215 00					20		3 00				4 mo	\$15	250
7 50	332 50	\$100	432 50					100		free						300
7 50	345 00		345 00							3 00						
8 50	365 50		365 00							3 50						700
7 50	292 50		292 50					80		3 00						50
7 50	352 50		352 50	352					6 00							140
6 00	234 00		234 00							3 00						100
8 00	280 00		280 00							3 00						50
6 00	240 00		240 00					50		2 50						
7 50	292 50		292 50							3 00						
6 00	222 00		222 00							1 00						
6 00	238 00		238 00							2 50						
5 50	71 50		71 50							2 50						
4 80	168 00		168 00							2 00						100
4 50	175 50		175 50							2 50						
7 50	138 00		138 00							3 00						
8 50	331 50		331 50					80		3 00						300
8 00	352 00		352 00							3 00						70
6 00	300 00		300 00					120		2 00						300
5 00	200 00		200 00					28		1 00						200
3 50	173 50		173 50							2 50						
6 00	282 00		282 00							3 00						100
7 50	345 00		345 00					50		3 50						150
6 75	297 00		297 00							3 00						50
3 00	129 00		129 00							1 50						
5 50	214 50		214 50	214					7 00							
4 50	157 50		157 50							25						60
6 00	204 00		204 00							free						
7 50	300 00		300 00	300					7 00							500
12 00	578 00		578 00	428	\$500	\$300	\$150									1000
7 50	292 50		292 50	292					6 00		\$1000					480
7 50	360 00		360 00	360					6 00							500
13 50	688 50		688 50	538				150	10 00		3000					800
9 00	234 00		234 00	234					5 00							75
12 00	480 00		480 00	330				150	7 00		1000	1	\$3 00			600
6 00	\$12 00		\$12 00							8 00	2000					

TABLE No. 9.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Iron worker.	24	U. S.	U. S.	W	—	—	—	—	—	26	26	out of work
Blacksmith.	42	"	"	M	3	3	2	—	5	33	13	laid off
"	32	"	"	M	1	1	1	1	3	28	16	out of work
"	56	"	"	W	4	4	1	—	5	52	—	—
"	56	"	"	W	4	4	—	—	4	28	26	out of work
Croster	31	"	Germany	m	3	3	2	—	4	48	4	"
Wood worker	39	Germany	"	m	5	4	3	—	5	46	6	laid off
Painter.	44	U. S.	U. S.	m	1	1	1	—	13	18	34	out of work
"	21	"	"	m	1	1	1	—	44	4	8	laid off
"	28	"	"	m	1	1	—	—	2	28	26	sick and out of work
"	25	"	Ireland	m	2	2	—	—	3	46	6	laid off
"	45	"	U. S.	m	1	1	—	—	1	46	6	sick and laid off
"	26	"	"	m	1	1	—	—	3	46	6	out of work
"	31	"	"	m	3	3	—	—	4	39	13	sick and laid off
"	56	"	"	m	1	1	1	—	2	31	21	sick and out of work
"	28	"	"	m	2	2	1	—	3	44	8	laid off
Wood worker	40	"	"	m	—	—	—	—	1	48	4	"
"	31	"	"	m	4	4	2	—	1	43	9	sick and laid off
"	33	"	"	m	4	4	—	—	5	43	9	laid off
"	61	Germany	Germany	m	4	4	1	—	5	48	4	"
"	49	U. S.	U. S.	m	2	2	1	—	3	46	6	sick and laid off
"	29	"	Germany	m	4	4	8	—	5	48	4	laid off
"	22	"	U. S.	m	1	1	—	—	3	39	12	laid off and vacation
"	30	"	"	m	1	1	—	1	3	43	9	laid off
"	35	"	"	m	3	3	2	—	4	49	3	"
"	50	"	"	m	2	1	1	—	2	52	—	—
"	25	"	"	m	1	1	—	—	1	46	6	laid off
"	39	"	"	m	2	2	—	1	2	49	2	"
"	51	"	Scotland	m	6	6	4	—	7	85	17	out of work
"	38	"	U. S.	m	2	2	1	—	3	43	9	laid off and vacation
"	34	"	"	m	1	1	—	—	9	33	19	out of work & sick
"	33	"	"	m	1	1	—	—	2	50	2	sick
"	22	"	"	m	2	2	—	—	3	48	4	laid off
"	48	"	"	m	4	4	3	1	5	39	13	accident and laid off
"	24	"	"	m	—	—	—	—	1	40	12	laid off
"	37	"	"	m	3	3	1	—	4	39	13	"
"	39	Germany	Germany	m	2	2	1	—	3	50	2	"
Laborer	26	"	"	m	1	1	—	—	2	48	9	"
"	30	U. S.	U. S.	m	1	1	—	—	2	39	13	"
Wood worker.	47	Ireland	Ireland	m	2	2	1	—	3	48	9	vacation
Laborer	32	U. S.	U. S.	m	1	1	—	—	2	48	9	laid off
Wood worker	38	"	"	m	5	5	4	—	9	35	17	out of work
Engineer	29	"	"	m	1	1	—	—	3	52	—	—
Blacksmith.	45	Ireland	Ireland	m	6	4	2	—	5	43	9	laid off & out of work
Finisher	31	U. S.	U. S.	m	2	2	1	—	3	39	13	sick and laid off
Trimmer	54	"	"	m	1	1	—	—	2	39	13	laid off
"	31	"	"	m	2	2	—	—	3	52	—	—
Painter	20	"	"	s	—	—	—	—	1	39	18	laid off and sick
"	21	"	"	s	—	—	—	—	1	31	21	out of work
Wood worker.	21	"	"	s	—	—	—	—	1	49	3	laid off
Blacksmith	22	"	"	s	—	—	—	1	1	48	4	"
Laborer	22	"	"	s	—	—	—	2	2	46	6	sick and laid off
Wood worker.	20	"	"	s	—	—	—	—	—	39	13	laid off

TABLE No. 9.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$3 00	\$156 00		\$156 00							\$3 00						
18 00	702 00		702 00	\$502				\$300	\$3 00	\$1000	1	\$3 00				\$2500
10 00	360 00		360 00	260	\$450	\$350	\$100								350	
18 00	936 00	\$250	1186 00	686	1500		300	200							5000	
10 00	260 00		260 00							4 00	1000					
12 00	576 00		576 00	576					6 00			1	4 00			150
9 00	414 00	120	534 00	384	800	300	100	50						22		1480
6 00	108 00		108 00	258					10 00		2000					600
6 00	264 00		264 00	250	800	400	14									800
7 50	195 00		195 00	195					7 00							200
7 50	345 00		345 00	345					6 00							400
10 00	480 00		480 00	310	1500		50	100			3000					2000
9 00	414 00		414 00	414					5 00			1	5 00			300
12 00	468 00	100	568 00	568					7 00		1000					400
6 00	186 00	96	282 00	307					8 50			1	3 00			800
9 00	396 00		396 00	396					6 00							500
18 00	864 00		864 00	564				300	8 00		2000					1500
7 50	322 50		322 50	206	800	200	116									850
7 50	322 50	12	334 50	294	800		40									1500
12 00	576 00	250	826 00	526	3000		100	200						36		3500
9 00	414 00	48	462 00	488	1200	200	24				2000					1200
9 00	432 00		432 00	357	600	300	75									800
8 00	312 00		312 00	312					7 00							300
10 00	480 00		480 00	290				150	8 00							500
9 00	441 00		441 00	341	800	250	100									1000
15 00	780 00	50	830 00	570	1000		60	200								3000
10 00	480 00		480 00	480					4 00							250
6 00	294 00		294 00	294					6 00							
6 00	231 00	144	375 00	315	800	400	60									800
7 50	322 50	50	372 50	362	1500		10									2000
10 00	330 00		330 00	220	800	600	110									300
9 00	450 00		450 00	450					6 00							800
8 00	384 00		384 00	384					6 00							100
12 00	468 00		468 00	468					6 00							
6 00	240 00		240 00	240					5 00							50
8 00	312 00		312 00	312					6 00							400
7 50	375 00		375 00	319	700	300	56							11	\$75	450
7 50	336 50		332 50	282	500	300	40	50						6		400
7 50	292 50		292 50	292					6 00							200
15 00	645 00		645 00	606	1500		40							30		2000
6 00	258 00		258 00	258					5 00							300
15 00	525 00		525 00	525					10 00							600
12 00	624 00		624 00	574				50	6 00							250
9 00	387 00	100	487 00	387	800	300	150							25		1000
12 00	468 00		468 00	468					6 00							800
15 00	595 00		595 00	568	800	240	17				3000					1000
12 00	624 00		624 00	574				50	7 00							700
7 50	392 50		392 50					25		3 00						100
7 50	322 50		322 50							2 50						50
7 00	343 00	150	493 00	343				150	†							1000
9 00	432 00		432 00	332				100	†							300
6 00	276 00		276 00	276					†							
7 00	273 00		273 00							†						600

† Lives at home and supports family.

† Lives at home and pays no stated amount for board.

TABLE No. 9.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Iron worker.....	14	U. S.	Germany	s	---	---	---	---	---	35	17	at school
Wood worker.....	15	"	U. S.	s	---	---	---	---	---	48	4	out of work
Laborer.....	15	Germany	Germany	s	---	---	---	---	---	35	17	laid off
Driller.....	14	U. S.	"	s	---	---	---	---	---	17	35	at school
Iron worker.....	14	"	"	s	---	---	---	---	---	43	9	out of work
Wood worker.....	15	"	U. S.	s	---	---	---	---	---	39	13	laid off
Wood worker.....	15	"	"	s	---	---	---	---	---	35	17	at school
CALKINS & Co.												
Foreman.....	44	"	Ireland	m	---	---	1	2	52	---	---	---
Stave cutter.....	40	Germany	Germany	m	2	2	1	3	50	2	---	laid off
Teamster.....	32	"	"	m	3	3	2	4	46	6	---	"
Laborer.....	32	U. S.	"	m	2	2	1	3	43	9	---	out of work
Cooper.....	35	"	U. S.	m	---	---	---	1	43	9	---	sick and vacation
".....	35	"	"	m	2	2	1	3	50	2	---	laid off and vacation
".....	42	Germany	Germany	m	6	6	2	7	50	2	---	vacation
".....	40	U. S.	U. S.	m	6	6	4	7	46	6	---	out of work
".....	68	"	"	wt	---	---	---	---	39	18	---	sick
".....	49	"	"	m	---	---	---	1	39	13	---	"
Laborer.....	36	"	"	m	1	1	1	2	26	26	---	sickness
Cooper.....	51	Prussia	Prussia	m	2	2	---	3	43	9	---	out of work
".....	69	U. S.	U. S.	m	---	---	---	1	50	2	---	sick
".....	60	"	"	m	2	---	---	1	48	4	---	"
".....	39	"	"	m	1	1	---	2	50	2	---	vacation
".....	27	"	"	m	1	1	---	2	52	---	---	---
".....	34	"	"	m	8	3	1	4	40	12	---	laid off and sick
".....	23	"	"	m	1	1	---	2	89	13	---	out of w'k & vacation
".....	56	"	"	m	2	2	---	8	35	17	---	out of work
".....	32	"	"	wt	1	1	1	2	17	35	---	out of w'k & vacation
".....	46	"	"	wt	---	---	---	---	39	13	---	sick and out of work
Laborer.....	20	"	"	s	---	---	---	---	40	12	---	laid off
Cooper.....	22	"	"	s	---	---	---	---	35	17	---	out of work
".....	25	"	"	s	---	---	---	---	35	17	---	"
Laborer.....	16	"	Prussia	s	---	---	---	---	22	30	---	"
".....	17	"	U. S.	s	---	---	---	---	35	17	---	laid off
Matcher.....	25	"	Germany	s	---	---	---	---	51	1	---	"
".....	22	"	U. S.	s	---	---	---	---	50	2	---	"
Cooper.....	24	"	"	s	---	---	---	---	46	6	---	out of work
Heading filler.....	29	Canada	Scotland	s	---	---	---	---	43	9	---	sick and laid off
Heading dresser.....	19	U. S.	Germany	s	---	---	---	---	50	2	---	laid off
Laborer.....	20	"	Ireland	s	---	---	---	---	26	26	---	out of work
Laborer.....	18	"	Germany	s	---	---	---	---	25	17	---	"
Sawyer.....	25	"	U. S.	s	---	---	---	---	43	9	---	"
Laborer.....	13	Poland	Poland	s	---	---	---	---	47	5	---	sick
Engineer.....	15	U. S.	Germany	s	---	---	---	---	35	17	---	out of work
Engineer.....	17	"	U. S.	s	---	---	2	2	43	9	---	sick and laid off
J. B. HELLENBERG.												
Turner.....	30	Germany	Germany	s	---	---	---	---	52	---	---	---
".....	80	"	"	m	3	3	---	4	46	6	---	sick and laid off
".....	53	U. S.	U. S.	m	2	1	---	2	51	1	---	sick
".....	28	"	Germany	m	2	2	1	3	48	4	---	laid off and sick
".....	23	"	"	m	---	---	---	---	52	---	---	---

TABLE No. 9.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born. No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.			
\$3 00	\$105 00		\$105 00					*							
3 60	172 80		172 80					*							
8 00	105 00		105 00					*					13		
3 00	51 00		51 00					*							
3 00	129 00		129 00					*							
4 00	156 00		156 00					*							
4 00	140 00		140 00					*							
10 50	546 00		546 00						\$3 00						\$2000
9 00	450 00		450 00	\$365	\$600	\$150	\$60	\$25					25		650
7 50	845 00		845 00	236	500	200	50						10	\$25	700
9 00	387 00	\$150	537 00	287	1400		50	200			\$500	1	\$4 00		1700
8 00	344 00		344 00	244				100	2 50						800
8 50	425 00		425 00	811	650	200	14	100			1200				900
8 00	400 00	200	600 00	582	800	300	18					1	4 00	33	1000
10 00	490 00		490 00	460					5 00						400
6 00	234 00		234 00					40		\$3 00					100
6 00	284 00	196	480 00	280	1200		150								3000
6 75	175 50		175 50	275					5 00						150
6 00	258 00	75	333 00	833	1800								28		2600
7 50	876 00		876 00	345	1400	400		30			1248				1600
4 50	216 00	168	384 00	384	800	200									1200
9 00	450 00		450 00	450	800	200									800
18 00	936 00		936 00	636	1500	500	200	100			3000				2000
9 00	360 00		360 00	360					7 00						200
12 00	468 00		468 00	368				100	8 00		1000				300
4 50	157 50		157 50	257					4 00						100
15 00	255 00		255 00	255					7 00		1000				500
9 00	351 00	24	375 00							†					300
4 00	160 00		160 00						2 50						50
15 00	525 00		525 00						3 50						75
10 00	350 00		350 00						3 00						200
6 00	132 00		132 00						free						
4 25	147 00		147 00						2 50						
6 25	420 75		420 75						8 50						150
8 00	400 00		400 00					100	4 00						250
9 00	414 00		414 00						3 50						150
12 00	516 00		516 00						3 00				24		200
8 00	400 00		400 00					25	8 00						75
7 50	195 00		195 00					25	4 00						100
6 00	210 00		210 00					25	8 00						
8 00	344 00		344 00						3 50						50
3 00	141 00		141 00					*	*				8		
3 00	105 00		105 00					*	*						
6 75	290 25		290 25	290					†						
9 00	468 00		468 00					100	8 00				5	50	1000
7 50	845 00		845 00	345	800				4 00				9	20	300
10 00	510 00		510 00	485	800		25								1080
9 00	432 00	50	482 00	364	800		118				500				1000
9 00	468 00		468 00	318	500		150								1000

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 9.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
C. W. JOHNSON.												
Laborer	14	U. S.	Germany	s						26	26	out of work
Cooper	39	"	Ireland	s						35	17	sick and out of work
"	32	"	U. S.	s						35	17	out of work
"	42	Scotland.	Scotland	s						52		
"	19	U. S.	U. S.	s						48	4	vacation
Laborer	16	"	"	s						39	12	out of work
"	22	"	"	s						46	6	sick
"	17	"	"	s						46	8	sick and out of work
"	25	"	Germany	s				1	1	48	9	laid off and vacation
Planer	18	"	U. S.	s						59	13	out of work
Laborer	20	"	"	s						39	12	sick and out of work
Cooper	62	"	"	m					1	52		
"	21	"	"	m						43	9	sick and vacation
"	23	"	"	m	1	1			2	51	1	out of work
"	61	"	"	wr						26	26	sick and out of work
Heading matcher	29	"	"	m	3	3	1		4	43	9	out of work
Teamster	34	"	"	m	1	1			2	50	2	laid off
Engineer	45	"	"	m					1	52		
Planer	37	"	"	m	3	8	2		4	44	8	laid off and vacation
Sawyer	35	"	"	m	2	2	1		3	50	2	laid off
"	50	"	"	m	4	2	1		3	42	10	out of work and sick
Cooper	42	"	"	m	4	4	3		5	39	13	sick and laid off
"	47	Canada	Ireland	m					1	52		
"	49	England	England	wr						52		
"	47	Ireland	Ireland	m					1	50	2	laid off
Laborer	25	U. S.	U. S.	m	1	1			2	39	13	out of work
Cooper	46	"	"	wr	2	1	1		1	31	21	out of work and sick
"	47	"	"	m	1	1			2	52		
"	40	"	"	m	1	1	1	1	3	46	6	sick

TABLE No. 9.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$3 00	\$78 00		\$78 00					*		*						
9 00	315 00		315 00							23 50						\$150
9 00	315 00		315 00							23 50						25
10 00	520 00		520 00					\$100		23 50					9	200
8 00	384 00		384 00							23 00						50
6 00	234 00		234 00							3 50						
7 50	345 00		345 00					50		23 50						150
6 00	276 00		276 00							3 00						
7 50	322 50		322 50	\$297				25	\$0 00	3 50						500
7 50	292 50		292 50													
6 00	284 00		284 00							3 50						50
6 00	312 00		312 00	312					5 00							200
8 00	344 00		344 00							4 50						300
7 00	357 00		357 00	357					8 00							50
6 00	156 00		156 00							3 00						50
9 00	387 00		387 00	362	\$900		\$25			\$1000						1000
8 00	400 00		400 00	325				75	6 50							375
9 00	468 00		468 00	383	1000	\$350	85	50								1200
7 50	330 00		330 00	390					8 00		1000					300
8 50	425 00		425 00	375				50	6 50							600
8 00	336 00	\$150	486 00	361	800	250	100	25								1000
9 00	351 00		351 00	351					4 00							150
10 50	546 00		546 00	312				233	6 00						35	400
7 00	364 00		364 00							3 50			*		42	150
10 00	500 00		500 00	500					6 00						18	200
7 50	292 50		292 50	292					6 00							500
10 00	310 00		310 00							6 00						300
9 00	468 00		468 00	393				75	6 50							500
8 00	368 00		368 00	347				21	free							1000

* Lives at home and gives wages to parents.

COLDWATER.

One hundred and seventy-nine employés were canvassed: J. B. Hellenberg (manufacturer of turned wooden goods), 5; C. W. Johnson, (cooperage), 29; Calkins & Co., 37; Coldwater Road Cart Co., 168.

Nationalities: Americans, 157; Germans, 12; Irishmen, 3; Canadians, 2; Scotchmen, 1; Englishmen, 1; Prussian, 1; Polander, 1; Russian, 1. 88-per cent are Americans and 12+per cent foreigners. Of the foreigners 55-per cent are Germans; 14-per cent Irishmen, 9+per cent Canadians and 4+per cent each Scotchmen, Englishmen, Prussian, Polander, and Russian. Parentage of those born in the United States: American, 132; German, 18; Irish, 6; Scotch, 1. 84+per cent have American and 16-per cent foreign parents. 89 are married, 81 single, and 9 widowers. 50-per cent are married, 45+per cent single, and 5+per cent widowers. There are employed 5 boys 15 years and four 14 years of age. 79 support self only; 3 support others than self by boarding and 97 support families: Americans, 84; Germans, 8; Irishmen, 3; Prussian, 1; Canadian, 1. In 97 families there are 169 children, of whom 162 are supported. 17 married men have no children of whom 15 or 88+per cent are Americans, 1 Canadian and 1 Irishman. Of the children supported 60 are under 5 years of age; 100 are 5 and under 20; and 2 are over 20. 71 attend school, which is 71 per cent of school age. 69 or 97+per cent attend the public schools and 2 parochial. Number of persons supported in families, 268; by boarding, 6. 19 employés support 23 persons besides wife and children. Total number of weeks worked during the year, 7,430; average, 41.5+. 163 men or 91+per cent, lost 1,842 weeks, or 35 years and 22 weeks. Cause of lost time: Sickness, 12; vacation, 6; accident and laid off, 2; no work, 41; sickness and no work, 13; laid off, 56; sickness and laid off, 19; laid off and vacation, 5; sickness and vacation, 2; no work and vacation, 2; at school, 5. Total annual earnings, \$60,820.30; average, \$339.78. Total income from other resources, \$2,483, as follows: Family-earnings, \$400; boarding, \$120; pensions, \$576; interest, \$62; rent, \$1,125; other sources, \$200. Total annual earnings of Americans, \$52,590.30; average, \$334.96; Germans, \$4,273; average, \$356.08; Irishmen, \$1,532; average, \$510.66; Canadians, \$1,062; average, \$531; Scotchman, \$520; average, \$520; Englishman, \$364; average, \$364; Prussian, \$258; average, \$258; Polander, \$141; average, \$141; Russian, \$80; average, \$80. Average weekly wages of married men, \$9.23; single men, \$6.62; all employés \$8.05. Wages paid per week: Eight, \$3 each; one, \$3.50; one, \$3.60; four, \$4; one, \$4.20; four, \$4.50; one, \$1.80; three, \$5; two, \$5.50; thirty, \$6; one, \$6.60; three, \$6.75; four, \$7; thirty-two, \$7.50; fifteen, \$8; one, \$8.25; four, \$8.50; twenty-six, \$9; thirteen, \$10; two, \$10.50; twelve, \$12; one, \$13; six, \$15; four, \$18.

Total family expenses, \$35,990; per capita, \$98.33; Americans, \$30,855; per capita, \$100.83; Germans, \$3,048; per capita, \$74.34; Canadians, \$312; per capita, \$156; Prussian, \$333; per capita, \$83.25; Irishmen, \$1,442; per capita, \$120.16. Number owning homes, 38; Americans, 28; Germans, 7; Irishmen, 2; Prussian, 1. All home owners are married men. 42+per cent of married men own homes. 74-per cent of home owners are Americans and 26+per cent of foreigners. Total value of homes, \$37,200; average, \$978.94. Americans, \$26,200; average, \$935.71; Germans, \$6,900; average, \$985.71; Irishmen, \$2,300; average, \$1,150; Prussian, \$1,800; average, \$1,800. The homes of 24 employés are mortgaged, which is 63+per cent. Value of mortgaged homes, \$19,500, mortgaged for \$7,080, which is 36+per cent of valuation. The homes of 17 Americans are mortgaged for \$5,430; 6 Germans, \$1,450; 1 Irishman, \$200. During the year 34 employés made payments and improvements upon homes amounting to \$1,757, and 50 saved \$4,535 in money. Total number of employés who saved, 72, which is 40+per cent. Total savings, including payments and improvements upon homes, \$6,292, which is 10+per cent of total earnings. Total present worth of 142 employés (37 not reporting), \$86,245; average, \$607.35. Americans, 122; total, \$70,470; average, \$577.62; Germans, 11; total, \$9,575;

average, \$870.45; Irishmen, 3; total, \$3,200; average, \$1,066.66; Canadians, 2; total, \$600; average, \$300; Scotchman, 1; total, \$200; Englishmen, 1; total, \$150; Prussian, 1; total, 2,000; Russian, 1; total, \$50. One employé is worth \$5,000. Four Germans had \$170 upon arrival in this country, 1 Russian, \$15. Total present worth of foreigners \$15,775. Number renting homes, 54; Americans, 51; German, 1; Irishmen, 1; Canadian, 1. 4 single men rent and one has rent free. 55+per cent of married men and 30+per cent of total employés rent. Total monthly rent \$346.50; average, \$6.12. Total annual rent, \$4,158; average, \$77. Per cent of rent to earnings, 20-; per cent of rent to expenses, 21+. Total monthly rent of Americans, \$330.50; average, 6.48; German, \$4; average, \$4; Irishman, \$6; average \$6; Canadian, \$6; average, 6.

Number of employés boarding, 68, which is 38-per cent of total. 10 live at home and gives wages to parents, 4 live at home and support family, 2 live at home and pay no stated amount for board. Total weekly board \$202.75; average, \$2.96. Americans, 61; total, \$181.25; average, \$2.97; Germans, 3; total, \$8.50; average, \$2.83; Russian, 1; total, \$3; Englishman, 1; total, \$3.50; Scotchmen, 1; total, \$3.50, Canadian, 1; total, \$3. 15 keep an itemized account of their expenses, which is 8+per cent of total. 71 own sewing machines, which is 73+per cent of those supporting families. 45 own musical instruments, which is 25+per cent. Number of musical instruments: Pianos, 3; organs, 26; violins, 7; guitars, 2; cornets, 3; clarionets, 2; melodeons, 1; drum, 1; piccolo, 1; horn, 1. Number of employés who take newspapers and magazines, 109; Americans, 97; Germans, 8; Irishmen, 2; Canadians, 2. 61-per cent take newspapers and magazines, of which 89-per cent are Americans. Number of dailies taken 86; story, 14; religious, 14; scientific, 2; local and other weekly newspapers, 109; magazines, 10.

116 work at hand, 54 at machine work and 9 at both. 7 employés or 4-per cent have been injured since engaged as employés. 21 carry life insurance amounting to \$31,448; average, \$1,497.52. All insured are Americans. 12-per cent of employés are insured. 7 belong to benefit societies: Americans, 6; total, \$24; average, \$4; German, 1; total, \$4. Total weekly benefit, \$28; average, \$4. 4-per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
DOWAGIAC.

TABLE No. 10.—Showing the Individual Reports of

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
P. D. BECKWITH.												
Molder	33	U. S.	England	m	1	1			2	50	2	sick and laid off
"	33	"	U. S.	m	1	1		1	2	48	4	laid off and vacation
"	33	"	"	m	1	1	1		2	48	4	laid off and sick
"	33	"	"	m	1	1			2	50	2	out of work
"	33	"	"	m	1	1			2	51	1	sick and holidays
"	37	"	"	m	1	1			2	51	1	holidays
"	37	Scotland	Scotland	m	1	1	1		2	51	1	sick and laid off
"	37	U. S.	U. S.	m	1	1			2	51	1	holidays
"	37	"	"	m	1	1			2	50	2	holidays and laid off
"	37	"	"	m					1	51	1	laid off
"	51	"	"	m	2	2	1		3	35	17	out of work and sick
"	51	"	"	m	1	1	1		2	51	1	holidays
"	27	"	"	m	1	1	1		1	49	3	sick and laid off
"	51	Ireland	Ireland	wr						50	2	holidays and laid off
"	36	U. S.	U. S.	m				1	2	50	2	"
"	50	Ireland	Ireland	m					1	48	4	laid off and sick
"	31	U. S.	Germany	m	1	1		1	3	49	3	laid off and holidays
"	28	"	U. S.	m	2	2	2		3	43	9	vacation
"	39	Germany	Germany	m	4	4		1	6	50	2	sick and laid off
"	32	Canada	Ireland	m					1	46	6	sick and out of work
"	27	Scotland	Scotland	m	2	2			3	51	1	holidays
"	33	"	"	m	4	4	3		5	48	4	sick and laid off
"	34	U. S.	U. S.	m				1	1	50	2	holidays and laid off
"	28	"	"	m					1	50	2	"
"	39	"	"	m	5	5	4	1	7	50	2	laid off and sick
"	61	"	"	m	1	1	1		3	50	2	holidays & vacation
"	27	"	"	m					1	43	9	sick
Laborer	42	England	England	m	1	1			2	51	1	holidays
Molder	49	Germany	Germany	m	5	5	8		6	47	5	sick
Rattler	21	U. S.	U. S.	m	1	1		1	3	48	9	out of work
Dresser	54	"	"	m	3	1	1	1	3	50	2	laid off and holidays
Rattler	40	Germany	Germany	m	4	4	2		5	51	1	holidays
Molder	30	U. S.	England	m	2	2	2		3	50	2	sick and holidays
"	30	Germany	Germany	m	1	1			2	50	2	sick
"	24	U. S.	U. S.	m					1	49	3	laid off and vacation
"	30	"	Germany	m	4	4	2		5	50	2	holidays and laid off
"	34	"	U. S.	m	1	1			2	46	6	laid off
Laborer	46	"	"	m	1	1			2	26	26	out of work
Engineer	38	England	England	m	3	3	3		4	52		
Laborer	30	U. S.	U. S.	m					1	48	4	sick
Mounter	35	"	"	m					1	52		
"	23	Germany	Germany	m				1	2	51	1	vacation
"	33	U. S.	U. S.	m	2	2	1		3	50	2	laid off
"	48	Germany	Germany	m	2	2	1		3	50	2	holidays and laid off
"	29	"	"	m	1	1			2	52		
Blacksmith	44	U. S.	Ireland	m	6	5	3	1	7	44	8	out of work
Wrapper	34	"	U. S.	m	1	1		1	3	50	2	holidays and laid off
Mounter	34	"	"	m					1	52		

the Employes Canvassed in Dowagiac.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$18 00	\$900 00		\$900 00	\$690	\$800	\$300	\$150	\$80			\$2200	2	\$11 00			\$1200
16 00	768 00		768 00	618				150	\$8 00		200	2	11 00			300
12 00	576 00	\$25	601 00	451	1200	175	150				2000					1200
10 50	525 00		525 00	485				40	7 00		100	1	6 00			400
15 00	765 00		765 00	682	1000	960	43	40			100	1	6 00			280
15 00	765 00		765 00	640				125	8 00		100	1	6 00			300
16 50	841 50		841 50	841					6 50		2100	1	6 00	35		500
15 00	765 00		765 00	590				175	6 00		100	1	5 00			500
15 00	750 00		750 00	680	600		70				2200	2	11 00			800
10 50	535 50		535 50	285				250	6 50		100	1	6 00			400
13 50	472 50		472 50	472					10 00		100	1	5 00			800
12 00	612 00		612 00	397	1700		15	200								1000
18 00	882 00		882 00	777	1000	950	55	50			200	2	11 00			400
17 00	850 00		850 00					300		\$4 00	200	2	11 00	41		1000
18 00	900 00	25		575				350	12 00		200	1	6 00			500
18 00	864 00		864 00	514	800	150	350				200	2	11 00	40		1200
18 00	882 00		882 00	682				200			200	2	11 00			1000
19 25	827 75	96	923 75	400	5000	3000	523				5100	1	6 00			4000
18 00	900 00		900 00	575	800	175	225	100			2100	1	6 00	22		1500
21 00	966 00		966 00	966					3 00		200	2	11 00	20		200
19 50	994 50		994 50	694	1200	600	300				310	2	9 00	3	\$100	1200
21 00	1008 00		1008 00	758	1000	550	250				200	2	11 00	3	20	900
18 00	900 00	150	1050 00	550	2000	850	500				1200	2	11 00			3000
18 00	900 00	20	920 00	660	1200	300	175	65			2100	1	6 00			1600
15 00	750 00		750 00	670	1000	500	40	40			2000					800
15 00	750 00		750 00	850	1000						200	2	11 00			1400
15 00	645 00		645 00	645					7 50		2200	2	11 00			300
12 00	612 00		612 00	412	1000	700	200							38		800
21 00	987 00		987 00	935	1200	400	52				2100	1	6 00	25		1200
8 40	361 20		361 20	311				50	5 00							150
9 00	450 00		450 00	450					5 00							200
10 50	535 50		535 50	435	800	162	100							14		800
16 50	825 00		825 00	575	1000	700	250				2300	2	11 00			1000
10 00	500 00		500 00	435	700	65	65				100	1	6 00	7		1000
18 00	882 00		882 00	532				350	6 00		100	1	5 00			500
18 00	900 00		900 00	750	700	350	150				200	2	11 00			600
10 50	483 00		483 00	433				50	5 00		100	1	6 00			600
7 50	195 00		195 00	195					5 00		100	1	6 00			35
15 00	750 00		750 00	680	1000			100			4600	2	21 00			1500
10 50	504 00		504 00	459				45	6 50		2100	1	6 00			500
10 50	546 00		546 00	446				100	free		2000					300
10 50	535 50		535 50	385				150	8 00		1100	1	6 00	23		500
10 50	525 00		525 00	335	800	65	190									1500
10 50	525 00		525 00	457	1000	200	67				4100	1	6 00	17	150	1800
10 50	546 00		546 00	346	600	150	200				2100	1	6 00	3	300	550
12 00	528 00		528 00	528					9 00							600
10 50	525 00		525 00	475				50	4 00		1100	1	6 00			500
10 50	546 00		546 00	396	800		150				1100	1	6 00			1100

TABLE No. 10.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Tinner	67	U. S.	U. S.	m	1	1			1	52		
"	28	"	"	m	1	1			2	51	1	holidays
Blacksmith	50	"	"	wt						47	5	sick
Machinist	49	"	"	m	1	1	1		2	52		
"	46	"	"	m	1	1			2	52		
Blacksmith	57	"	"	m	1	1			2	46	6	out of work
Pattern maker	54	"	"	m				1	2	49	3	vacation
"	39	"	"	m	3	3	3		4	52		
"	31	"	"	m	2	2	1		3	43	9	sick and out of work
"	28	"	"	m	2	2			3	51	1	holidays
"	51	"	"	m	1	1		1	2	53		
Molder	34	"	"	m	1	1	1	2	4	48	4	sick and holidays
Grinder	38	Canada	Canada	m	2	2			3	41	11	sick and laid off
Fitter	29	U. S.	"	m	1	1			2	51	1	holidays
Polisher	35	"	"	m	3	3	1		4	50	2	laid off and vacation
"	30	"	"	m	3	3	2		4	46	6	out of work
"	30	"	"	m	4	4	1		5	51	1	holidays
Driller	32	Sweden	Sweden	m					1	51	1	"
Laborer	41	Germany	Germany	m					1	51	1	"
"	27	U. S.	"	m					1	51	1	"
Molder	33	U. S.	"	m	1	1	1		2	51	1	"
"	31	"	U. S.	m	1	1			2	52		
"	27	"	Germany	m	1	1			2	39	13	laid off
"	26	"	"	m					1	51	1	holidays
Polisher	30	"	U. S.	m	1	1	1		2	52		
Grinder	40	"	"	m	3	3	2		4	52		
Polisher	32	"	Germany	m	3	3	2		4	50	2	sick and holidays
Driller	52	"	U. S.	m	1	1			1	50	2	"
"	37	"	"	m	2	2	2		3	50	2	holidays and laid off
Buffer	24	"	"	m	1	1			2	50	2	laid off
Driller	28	Canada	Ireland	m	1	1	1		2	52		
Polisher	26	U. S.	U. S.	m	1	1			2	51	1	holidays
Driller	30	"	"	m	2	2			3	51	1	"
Finisher	24	"	"	m					1	47	5	laid off and out of work
Polisher	28	"	"	m					1	50	2	vacation
Mounter	42	"	"	m	4	4	1		5	35	17	out of work
"	28	"	"	m					1	48	4	sick and laid off
Tinner	17	"	"	s						37	15	at school
Molder	19	"	Ireland	s						39	13	out of work
Buffer	21	"	U. S.	s						49	8	sick and holidays
Molder	20	Germany	Germany	s						51	1	holidays
Dresser	28	U. S.	Ireland	s						48	9	out of work
Machinist	20	"	U. S.	s						48	4	vacation
Tinner	17	"	"	s				1	1	52		
Mounter	25	"	"	s				1	1	51	1	holidays
Polisher	25	Germany	Germany	s						50	2	vacation
Molder	20	U. S.	U. S.	s						50	2	holidays
"	31	"	"	s			1		1	51	1	"
"	19	"	"	s						48	9	out of work
"	16	"	"	s						50	2	laid off
"	26	"	"	s			2	2	4	48	9	sick and accident
"	20	"	"	s						51	1	holidays
Battler	40	Germany	Germany	s			1		1	51	1	"

TABLE No. 10.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$15 50	\$906 00	\$100	\$906 00	\$706	\$2500		\$100	\$100			\$2000					\$5000
23 07	1176 57		1176 57	976				200	\$7 00		2000					1000
15 00	705 00		705 00					300		\$3 50						2000
13 00	624 00		624 00	624					8 00		1400	1	\$9 00			500
19 23	1000 00		1000 00	800	2000			200			3000					2500
13 00	552 00	100	652 00	652					8 00		2500					8000
13 50	661 50		661 50	436	750	\$400	150	75			1000					1000
18 00	986 00		986 00	746	800	150	190				2000					800
13 00	516 00		516 00	516				200	8 00							1000
13 00	612 00		612 00	612					7 50							500
23 07	1200 00		1200 00	500	3000		100	600								3600
14 00	672 00		672 00	672					7 00		100	1	5 00			100
9 00	369 00		369 00	369	500	174										600
12 00	612 00		612 00	512	700		50	50			2000					1325
9 00	450 00		450 00	375				75	free							250
11 00	506 00		506 00	506					8 00							200
10 50	535 50		535 50	435				100	7 00							250
10 50	535 50	72	607 50	532	500		75				2000					1300
9 00	459 00		459 00	459					3 50		100	1	6 00	21	\$200	200
9 00	459 00		459 00	359				100	free							200
10 50	535 50		535 50	495	700		50				100	1	6 00			1000
10 50	546 00		546 00	420	1050	600	75	40								3000
10 50	409 50		409 50	389	800	780	20				3200	1	11 00			300
7 50	382 50		382 50	307				75	6 00							100
13 00	624 00		624 00	369				225	6 00							500
18 50	702 00		702 00	351	900	300		351			2000					1200
9 00	480 00		480 00	455	1000			25			2100	1	6 00			1400
10 00	500 00		500 00	400	1000			100								1500
10 50	525 00		525 00	475				50	5 00		100	1	6 00			400
9 00	450 00		450 00	450					5 00							200
10 50	546 00		546 00	546					5 00		2100	1	6 00			700
9 00	459 00		459 00	459					6 00		1000					500
12 00	612 00		612 00	412	800	350	200									1000
10 50	493 50		493 50	413	800	150	80									1000
10 50	525 00		525 00	225	900	200	380									700
12 00	420 00	50	470 00	420				50	8 00		2100	1	6 00			600
13 00	576 00		576 00	476				100	4 60		2100	1	6 00			600
5 00	185 00		185 00					*	*							
7 50	292 50		292 50					*	*		100	1	6 00			50
9 00	441 00		441 00					*	†							200
12 00	612 00		612 00						*					9		75
7 50	322 50		322 50						3 50							50
10 50	504 00		504 00					50	2 50							165
7 50	390 00		390 00	365				25	3 00							200
10 50	535 50		535 50	480	800		50	25								120
7 50	375 00	7	382 00					70	3 00		100	1	6 00	24		425
15 00	750 00		750 00					200	3 00			1	6 00			500
13 50	688 50		688 50						3 50							900
12 00	516 00		516 00					75	3 50							150
13 50	675 00		675 00					50	3 50		100	1	6 00			
20 00	880 00		880 00						3 50		200	2	11 00			200
18 00	918 00		918 00					200	3 50							600
9 50	484 50		484 50					100	3 50					9	50	500

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 10.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.		
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.	
Laborer	20	U. S.	U. S.	s						43	9	out of work	
Molder	21	"	Germany	s						52			
"	23	"	U. S.	s						51	1	holidays	
"	40	Ireland	Ireland	s						48	4	sick and laid off	
"	18	U. S.	U. S.	s						46	6	out of work	
"	20	"	"	s						46	6	"	
"	23	"	"	s						50	2	sick and laid off	
"	22	"	"	s						50	2	"	
"	36	"	"	s						35	17	sick	
"	24	"	"	s						39	13	out of work	
"	24	"	"	s						51	1	holidays	
"	30	"	Ireland	s						51	1	"	
Polisher	25	"	Germany	s						50	2	holidays and sick	
"	28	"	U. S.	s						51	1	holidays	
"	23	"	Germany	s						39	13	out of work	
Molder	22	"	Ireland	s						43	9	sick	
"	30	"	U. S.	s						50	2	holidays	
Laborer	30	Germany	Germany	s						51	1	sick	
Tinner	18	U. S.	U. S.	s				2	2	50	2	holidays and laid off	
Laborer	19	"	Germany	s						48	4	out of work	
"	24	"	U. S.	s						51	1	vacation	
Polisher	18	"	"	s						31	21	out of work	
DOWAGIAC MFG. CO.													
Laborer	39	"	"	wr	8	2	2		3	39	13	sickness in family	
"	28	"	"	m	1	1			2	39	13	sick	
Core maker	41	Canada	England	m	4	4	3		5	38	14	sickness and out of work	
Laborer	33	Germany	Germany	m	2	2	1		3	50	2	out of work	
"	34	U. S.	U. S.	m	1	1	1		2	32	20	"	
Machinist	40	"	"	m				1		2	50	2	holidays and out of work
"	28	"	"	m	2	2	1		3	50	2	out of work	
Wood worker	60	"	"	m	1	1			1	51	1	holidays	
Laborer	57	"	"	m	2	2	1		3	39	13	out of work	
Polisher	32	"	"	m	2	2			3	51	1	holidays	
Blacksmith	62	"	"	m					1	26	26	out of work	
Engineer	43	"	"	m	3	3	2		4	39	13	sick and out of work	
Wood worker	45	"	"	m	1	1	1		2	39	13	out of work	
Laborer	32	"	"	m	2	2			3	30	22	"	
Molder	23	"	"	m	3	3	2		4	43	9	"	
Laborer	53	Germany	Germany	m	6	6	5		7	35	17	sick	
Painter	30	U. S.	U. S.	m	1	1			2	48	4	out of work	
"	51	"	Ireland	m	2	1	1		2	44	8	"	
Molder	22	"	U. S.	m	1	1		1	3	39	13	"	
Laborer	36	"	"	m	1	1	1		2	49	3	"	
"	40	"	"	m	3	3	2		4	50	2	laid off	
Blacksmith	28	"	"	m					1	43	9	sick and out of work	
"	42	"	"	m				1	2	52		"	
"	25	"	"	m	2	2			3	50	2	sick and holidays	
Molder	29	"	"	m	1	1			2	39	13	out of work	
"	22	"	"	m					1	43	9	"	
"	38	Canada	England	m	4	4	3		5	46	6	shut down	
Wood worker	40	U. S.	U. S.	m	4	3	3	1	5	51	1	holidays	
"	58	"	"	m	1	1			2	47	5	vacation	

TABLE No. 10.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$387 00		\$387 00							\$4 00						\$80
9 00	408 00		408 00							3 50						800
16 50	841 50		841 50					\$275		3 50	\$100	1	\$8 00			800
15 00	720 00		720 00					300		3 50	200	2	11 00	30		500
15 00	690 00		690 00					100		3 50	100	1	6 00			200
7 00	322 00		322 00							3 50						50
9 00	450 00		450 00							3 50						100
18 00	900 00		900 00					500		3 50	100	1	5 00			600
18 00	630 00	\$75	705 00					300		3 50	100	1	5 00			1000
9 00	351 00		351 00					10		3 50		1	6 00			250
15 00	785 00		785 00					50		3 00	100	1	6 00			600
16 50	841 50		841 50					130		4 00	200	2	11 00			150
10 50	525 00		525 00					100		3 00	100	1	6 00			200
10 50	535 50		535 50							3 50						50
9 00	351 00		351 00					125		2 50	100	1	6 00			300
16 50	709 50		709 50					150		4 00	100	1	5 00			300
18 00	900 00		900 00					100		4 00	200	2	11 00			300
10 50	535 50		535 50					50		3 00				15		300
7 50	375 00		375 00	\$285				80	\$6 00							125
8 40	403 20		403 20							5 00						35
7 50	383 50		383 50					50		3 00						110
7 50	282 50		282 50							3 00						
6 00	234 00		234 00	134	\$500	\$310	\$50									250
6 78	263 64		263 64	263												40
9 00	342 00	150	492 00	292	800		200		3 00							1150
9 00	450 00		450 00	307	850	600	143							22		1000
7 50	240 00		240 00	186				54	7 00					26		500
9 00	450 00		450 00	287	1000	400	28	125			2000					900
9 00	450 00		450 00	450					6 00							1000
11 00	561 00	150	711 00	511	2000	1000		200		7 00						3000
9 00	351 00	42	393 00	393						5 00						100
9 00	459 00		459 00	459												100
12 00	312 00	248	560 00	360	2000			200								5000
10 50	409 50		409 50	409					8 00							1000
9 00	351 00		351 00	251				100	6 00							2500
9 00	270 00		270 00	220				50	7 00		2000					1800
7 50	322 50		322 50	322	1000	450					2000					800
9 00	315 00		315 00	230	1200	700	85				2000			26	\$100	600
12 00	576 00		576 00	476				100	7 00							400
10 50	462 00	200	662 00	612				50	2 50							500
12 00	468 00		468 00	408				60								225
16 50	808 50		808 50	808					6 50							700
10 50	525 00	180	705 00	405				300	8 50		2000					1200
9 00	387 00		387 00	387					5 00							100
12 00	634 00	10	634 00	384	1000		300									2000
12 00	600 00		600 00	450	600	250	150									500
10 50	409 50		409 50	409					4 50							200
10 50	451 50		451 50	276				175								
12 00	552 00		552 00	522	800		30				2000					1000
15 00	765 00		765 00	540	800		25	200			2000					1300
12 00	564 00		564 00	414	1600		50	100								3000

TABLE No. 10.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	35	U. S.	U. S.	M	3	2			2	49	2	laid off
"	37	"	"	M	1	1			2	48	6	sick and laid off
Wood worker	49	Canada	Canada	M	1	1	1		3	43	9	vacation
"	27	U. S.	U. S.	M	2	2			3	40	12	sick and laid off
"	29	"	"	M					1	48	4	laid off
"	50	"	"	M	4	2	1		3	51	1	holidays
"	66	"	"	M	1	1			2	43	9	laid off and accident
"	29	"	"	M					1	51	1	holidays
Laborer	18	"	"	S						25	25	out of w'k & accident
Molder	30	"	"	S						25	25	vacation
"	45	"	"	S						35	17	out of work
Wook worker	29	"	"	S				1	1	39	13	"
"	17	"	"	S						31	21	out of work & at school
Machinist	24	"	"	S						39	18	out of work
Blacksmith	30	"	"	S						53	17	sick and out of work
Molder	24	"	"	S						45	7	out of work
Painter	23	"	"	S						49	4	sick and holidays
"	30	"	"	S						43	4	out of work
"	30	"	"	S						35	17	out of work & vacation
"	18	"	"	S						25	25	vacation
"	18	"	"	S						25	17	out of work
Wood worker	21	"	"	S						49	3	"
Molder	40	"	"	S				2	2	46	6	"
"	29	"	"	S						42	10	sick and laid off
"	29	"	"	S						51	1	holidays
Wood worker	52	"	"	S						43	9	out of work

TABLE No. 10.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, amt.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$589 00		\$589 00	\$388	\$700	\$275	\$300				\$2000					\$800
9 00	414 00		414 00	264	900	530	150									670
10 50	451 50	\$255	706 50	380	1500		300	\$100								2000
9 00	390 00		390 00	280				100	\$8 00							210
10 00	450 00		450 00	330				150	free							850
12 00	612 00		612 00	612												300
10 80	464 40	50	514 40	459	2500		25		8 00							500
9 00	458 00		458 00	284	600	200	225				2000					600
6 00	156 00		156 00					40								100
10 50	273 00		273 00					30		\$8 00						75
13 50	472 50		472 50													50
7 50	282 50		282 50	282					5 00	3 50						100
6 00	186 00		186 00							2 50						
10 00	390 00		390 00							5 00						200
9 00	315 00		315 00							5 00						150
9 00	405 00		405 00							3 50		2	\$8 00			50
4 50	216 00		216 00				75			2 00						200
4 00	238 00		238 00							2 00						200
7 50	262 50		262 50				50			3 50	625					75
6 00	156 00	50	206 00				50			2 00						400
5 00	175 00		175 00							2 50						
10 50	514 50		514 50				50			2 50						100
12 00	552 00		552 00	552					6 00							
12 00	504 00		504 00					25		2 50						400
12 00	612 00		612 00					100		2 50						300
9 00	387 00		387 00					75		3 00	2000					800

DOWAGIAC.

One hundred and seventy-eight employes were canvassed: Dowagiac Manufacturing Co. (manufacturers of grain drills), 55; P. D. Beckwith (manufacturer of stoves), 123.

Nationality: Americans, 149; Germans, 14; Canadians, 6; Irishmen, 3; Scotchmen, 3; Englishmen, 2; Swede, 1. 84-per cent are Americans, and 16-per cent foreigners. Of the foreigners 48-per cent are Germans; 21-per cent Canadians; 10-per cent Scotchmen; 10-per cent Irishmen; 7-per cent Englishmen; 3-per cent Swedes. Parentage of those born in the United States: American, 130; German, 11; Irish, 6; English, 2; 87-per cent have American and 13-per cent foreign parents. 119 employes are married, 56 single and 3 widowers. 67-per cent are married, 31-per cent single and 2-per cent widowers. 50 employes support self only; 3 support others than self by boarding, and 125 support families: Americans, 102; Germans, 10; Canadians, 6; Scotchmen, 3; Englishmen, 2; Irishman, 1; Swede, 1. In 125 families there are 178 children, of whom 169 are supported. 33 married men have no children: 26 or 79-per cent are Americans; 4 Germans; 2 Irishmen; 1 Swede. Of the children supported 59 are under 5 years of age; 107 are 5 and under 20, and 3 are over 20. 85 attend school, which is 79-per cent of school age. All attend the public schools. Number of persons supported in families, 314; by boarding, 4. 26 employes support 30 persons besides wife and children. Total number of weeks worked during the year, 8,253; average, 46.3+. 162 men or 91-per cent lost 1,003 weeks, or 19 years and 15 weeks. Cause of lost time: Sickness, 11; vacation, 11; accident and laid off, 1; holidays, 34; no work, 40; laid off and no work, 1; sickness and holidays, 8; sickness and no work, 8; laid off, 7; sickness and laid off, 17; laid off and vacation, 3; no work and vacation, 1; holidays and vacation, 1; at school, 1; accident and no work, 2; holidays and no work, 1; shut down, 1; holidays and laid off, 13; sickness and accident, 1. Total annual earnings, \$99,583.26; average, \$559.45. Total annual income from other resources, \$2,055, as follows: Family earnings, 442; interest, \$500; rent, \$708; other sources, \$405. Total annual earnings of Americans, \$81,391.26; average, \$546.25; Germans, \$7,760; average, \$554.28; Canadians, \$3,226.50; average, \$537.75; Irishmen, \$2,434; average, \$811.33; Scotchmen, \$2,844; average, \$948; Englishmen, \$1,392; average, \$696; Swede, \$535.50; average, \$535.50. Average weekly wages of married men, \$12.44; single men, \$10.66; all employes, \$11.88. Wages paid per week: One employe, \$4.50; two, \$5; five, \$6; one \$6.76; one, \$7; thirteen, \$7.50; two, \$8.40; twenty-nine, \$9; one, \$9.50; one, \$9.60; four, \$10; thirty-four, \$10.50; one, \$10.80; two, \$11; twenty-seven, \$12; six, \$13.50; one, \$14; fourteen, \$15; one, \$15.50; one, \$16; six, \$16.50; one, \$17; fifteen, \$18; one, \$19.23; one, \$19.25; one, \$19.50; one, \$20; three \$21; two, \$23.07.

Total family expenses, \$59,798; per capita, \$136.21; Americans, \$47,802; per capita, \$139.36; Germans, \$4,564; per capita, \$97.10; Canadians, \$3,001; per capita, \$125.04; Irishmen, \$514; per capita, \$257; Scotchmen, \$2,293; per capita, \$176.38; Englishmen, \$1,092; per capita, \$136.50; Swedes, \$532; per capita, \$266. Number owning homes, 62: Americans, 44; Germans, 8; Canadians, 4; Irishman, 1; Scotchmen, 2; Englishmen, 2; Swede, 1. 60 married men, 1 single man and 1 widower own homes. 50-per cent of married men and 35-per cent of total employes own homes. 71-per cent of home owners are Americans and 29-per cent foreigners. Total value of homes, \$69,750; average, \$1,125; Americans, \$53,500; average, \$1,215.90; Germans, \$7,150; average, \$893.75; Canadians, \$3,600; average, \$900; Irishman, \$800; average, \$800; Scotchmen, \$2,200; average, \$1,100; Englishmen, \$2,000; average, \$1,000; Swede, \$500; average, \$500. The homes of 41 employes are mortgaged, which is 66-per cent. Value of mortgaged homes, \$42,150; mortgaged for \$19,296; which is 46-per cent of valuation. The homes of 28 Americans

are mortgaged for \$14,670; 8 Germans for \$2,452; 1 Canadian, \$174; 1 Irishman, \$150; 2 Scotchmen, \$1,150; 1 Englishman, \$700. During the year 52 employes made payments and improvements upon homes amounting to \$7,671, and 92 men saved \$11,740 in money. Total number of employes who saved, 127, which is 71+per cent. Total savings, including payments and improvements upon homes, \$19,411, which is 19+per cent of total earnings. Total present worth of 171 employes (7 not reporting), \$137,670; average, \$805.06; Americans, 142; total, \$113,170; average, \$796.97; Germans, 14; total, \$10,450; average, \$746.42; Canadians, 6; total, \$5,650; average, \$941.66; Irishmen, 3; total, \$2,200; average, \$733.33; Scotchmen, 3; total, \$2,600; average, \$866.66; Englishmen, 2; total, \$2,300; average, \$1,150; Swede, 1; total, \$1,300. 2 employes are worth \$5,000 each, and one \$5,500. 5 Germans had \$800 upon arrival in this country; 2 Scotchmen, \$120. Total present worth of foreigners, \$24,500. Number renting homes, 56: Americans, 51; Germans, 2; Canadians, 2; Scotchmen, 1. 4 renters are single men and 4 have rent free. 43+per cent of married men and 31+per cent of total employes rent. Total monthly rent, \$353.60; average, \$6.31. Total annual rent, \$4,243.20; average, \$75.76. Per cent of rent to earnings, .14+. Per cent of rent to expenses, .16-. Total monthly rent of Americans, \$327.60; average, \$6.42; Germans, \$11.50; average, \$5.75; Canadians, \$8; average, \$4; Scotchman, \$6.50; average, \$6.50.

Number of employes boarding, 48, which is 27-per cent of total. 2 live at home and give wages to parents; 2 live at home and pay no stated amount for board. Total weekly board, \$163.50; average, \$3.41; Americans, 43; total, \$145.50; average, \$3.38; Germans, 3; total, \$9.50; average, \$3.16; Irishmen, 2; total, \$8.50; average, \$4.25. 21 employes keep an itemized account of their expenses, which is 12-per cent. 95 own sewing machines, which is 76 per cent of those supporting families. 42 own musical instruments, which is 24-per cent. Number of musical instruments: Pianos, 6; organs, 15; violins, 3; horns, 3; cornets, 2; guitars, 5; piccolos, 2; melodeons, 3; banjo, 1; accordion, 1; music box, 1; bass viol, 1. Number of employes who take newspapers and magazines, 141: Americans, 117; Germans, 9; Canadians, 6; Irishmen, 3; Scotchmen, 3; Englishmen, 2; Swede, 1. 79+per cent take newspapers and magazines, of which 82+per cent are Americans. Number of dailies taken, 114; story, 24; sporting, 6; religious, 8; labor, 2; scientific, 4; local and other weekly papers, 125; magazines, 18.

131 work at hand and 36 at machine work and 11 at both. 6 men or 3+per cent have been injured since engaged as employes. 18 reported that their labor organization had been of financial benefit to them, and 12 no financial benefit. Other than financially, 5 reported that their labor organization had been of benefit socially, 6 socially and educationally, 11 educationally, 1 socially and morally and 7 no benefit. 87 carry life insurance amounting to \$104,335; average, \$1,199.25; Americans, 67; total, \$76,425; Germans, 9; total, \$13,800; Canadians, 3; total, \$4,300; Irishmen, 3; total, \$600; Scotchmen, 3; total, \$2,610; Englishman, 1; total, \$4,600; Swede, 1; total, \$2,000. 49-per cent are insured. 66 belong to benefit societies: Americans, 49; total, \$360; average, \$7.34; Germans, 8; total, \$48; average, \$6; Canadians, 2; total, \$17; average, \$8.50; Irishmen, 3; total, \$33; average, \$11; Scotchmen, 3; total, \$26; average, \$8.66; Englishman, 1; total, \$21. Total weekly benefit, \$505; average, \$7.65. 37+per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
MUSKEGON.

TABLE No. 11.—*Showing the Individual Reports of*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
ROCKES IRON MFG. CO.												
Foreman	36	U. S.	Canada	m	2	2	2	1	4	52		
Machinist	38	"	U. S.	m	3	3	3		4	50	2	sick
"	43	Germany	Germany	m	2	1			2	49	3	"
"	36	Sweden	Sweden	m	4	4	3		5	49	3	"
"	47	Canada	Holland	m	6	4	4		5	47	5	"
"	31	Germany	Germany	m	3	3	1		4	46	6	"
"	43	Switz.	Switz.	m	3	1			2	51	1	"
"	42	U. S.	U. S.	m				2	3	52		
"	26	"	Canada	m				1	2	52		
"	37	Sweden	Sweden	m	3	3	2		4	50	2	sick
"	36	Scotland	Scotland	m	3	3	2		4	50	2	sickness
"	25	U. S.	U. S.	m					1	52		
"	36	Holland	Holland	m	4	4	2		5	49	3	sick
"	31	U. S.	U. S.	m					1	48	4	"
"	45	Holland	Holland	m	6	4	3		5	52		
Laborer	43	U. S.	Germany	m	3	1	1	1	3	50	2	sick
Molder	42	"	Canada	m	3	3	3		4	50	2	"
"	37	Canada	England	m	3	3	3		4	49	3	"
"	33	U. S.	U. S.	m	2	2	1		3	52		
"	46	Germany	Germany	m	5	1	1	1	3	49	3	sick
"	27	Holland	Holland	m	1	1		1	3	51	1	"
"	42	U. S.	Canada	m	2	2	1	1	4	52		
"	35	Holland	Holland	m	3	3	3		4	52		
Cupola tender	28	"	"	m	1	1		1	3	50	2	sickness
Draftsman	47	U. S.	U. S.	m	4	4	3		5	52		
Blacksmith	36	"	"	m	3	3	3		4	52		
"	43	Holland	Holland	m	4	4	4		5	49	3	sick
"	49	Canada	Canada	m	5	3	2		4	51	1	"
"	51	Norway	Norway	m	7	2	2		3	50	2	"
"	42	Germany	Germany	m	5	4	3		5	48	4	"
Pattern maker	34	"	"	m	2	2	2		3	48	4	"
"	44	England	England	m	5	3	3		4	48	4	"
Machinist	30	Germany	Germany	m	3	3	1		4	50	2	"
Molder	26	Holland	Holland	m	1	1			2	46	6	sickness
Laborer	47	U. S.	"	m	5	2	2		3	52		
"	51	Holland	"	wt	7	2			2	50	2	sick
Machinist	40	Germany	Germany	wt	6	1			1	48	4	"
Laborer	52	"	"	wt	3					47	5	sickness
Teamster	37	"	"	wt	2					49	3	sick
Machinist	21	U. S.	Holland	s				1	1	52		
Blacksmith	17	"	Norway	s						30	22	school
Pattern maker	20	"	U. S.	s						49	3	sick
Carpenter	32	Canada	England	s						46	6	"
"	22	U. S.	"	s						49	3	"
Laborer	19	Germany	Germany	s						48	4	"
"	20	Canada	"	s						47	5	"
Machinist	17	U. S.	U. S.	s						38	14	school
"	23	Holland	Holland	s						48	4	sick

the Employés Canvassed in Muskegon.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$18 00	\$896 00		\$926 00	\$700	\$1500		\$80				\$2000					\$2000
15 00	750 00		750 00	675	1000	\$200	75							18	\$150	1500
15 00	735 00		735 00	785 00	800	300	80				1000	1	\$5 00	11	38	1600
15 00	725 00		725 00	725					\$10 00					13	100	600
15 00	705 00		705 00	700					9 00			1	5 00			900
15 00	660 00		660 00	690	800	200								19		1200
15 00	765 00		765 00	630	900	800	100							7	80	1200
15 00	780 00	\$120	900 00	700	1500		200				2000					2000
15 00	780 00		780 00	600	1500		175				2000					2000
15 00	750 00		750 00	670				\$50	10 00					5	60	500
15 00	750 00		750 00	675										13	75	900
10 50	546 00		546 00	540				75	10 00							400
13 50	661 50		661 50	650					7 00							600
13 50	720 00		720 00	625	1000	300	40		9 00		1000	1	5 00	11	65	1800
9 00	468 00		468 00	468					6 00		2000			8	150	600
10 50	525 00		525 00	525	1200	400					1000	1	5 00			1500
13 00	900 00	120	1020 00	720	1500		200				3000	1	5 00			3000
15 00	735 00		735 00	700	800	250	80				1000	1	5 00	5	85	800
15 00	730 00	96	826 00	650	1000		130				1000	1	5 00			2500
15 00	735 00		735 00	700					12 00					4	120	700
15 00	765 00		765 00	690				60	13 00					3	40	650
15 00	780 00	124	904 00	650	1500		150	250			2000	1	5 00			3800
15 00	780 00		780 00	600	800							1	5 00	17		1200
12 00	600 00		600 00	600					8 00					7	35	500
24 00	1248 00	860	1628 00	750	1800		200	600			5000					6000
16 50	853 00	121	979 00	675	1800		250	50						14		8000
16 50	808 50		808 50	700	900		95							23	80	1500
10 50	535 50		535 50	535					8 00					18	150	800
9 00	450 00	180	630 00	680	800									17	130	1300
16 50	792 90	90	882 00	675	1000		200				1000	1	5 00	14	60	2000
18 00	864 00	84	948 00	700	1500		165				2000	1	5 00	17	150	2500
18 00	864 00		864 00	724	1200			140						5	600	2200
15 00	750 00		750 00	650				100	7 00					5	100	600
15 00	690 00		690 00	690					8 00					10		500
9 00	468 00		468 00	460					7 00							900
9 00	450 00		450 00	440					7 00					21	100	600
13 50	648 00		648 00	600			40		7 00					32	100	1200
9 00	423 00		423 00				125			\$4 00				13	60	500
9 00	441 00		441 00				150			4 00				12	75	800
13 50	708 00		708 00	600			100		8 00							500
6 00	120 00		120 00					*		*						
10 50	514 50		514 50				250			\$ 60						325
12 00	562 00		562 00				350			3 50				13	25	1000
12 00	598 00		598 00				375			\$ 50						600
8 00	394 00		394 00				175			3 00				17		200
7 50	352 50		352 50				50			\$ 50				11		80
4 00	152 00		152 00				*			*						
13 50	648 00		648 00				60			4 00				18		150

* Lives at home and gives wages to parents.

TABLE No. 11.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	19	Switz.	Switz.	s						52		
"	22	Canada	Scotland	s						52		
"	20	Germany	Germany	s						47	5	sick
"	19	Holland	Holland	s						49	3	"
Molder	19	Germany	Germany	s						48	4	"
"	19	U. S.	"	s						47	5	"
Laborer	22	Scotland	Scotland	s						49	3	"
JOHNSTON BROS. & Co.												
Book-keeper	43	Canada	Canada	m	5	4	2		5	52		
Foreman	43	U. S.	U. S.	m	4	4	3		5	52		
Boiler maker	34	Holland	Holland	m	4	4	2		5	50	2	sick
"	45	Germany	Germany	m	5	3	2		4	49	3	"
"	45	U. S.	U. S.	m				1	3	52		
Helper	48	"	"	m	5	1	1		2	50	2	sick
Boiler maker	48	"	Germany	m	4	2	1		3	50	2	"
"	49	Germany	"	m	5	3	3		4	46	6	"
"	28	U. S.	England	m	2	2		1	4	50	2	"
"	32	Scotland	Scotland	m	3	2		1	2	49	3	"
"	58	U. S.	U. S.	m	4		1		2	49	3	"
"	47	"	Canada	m	3	1			2	50	2	"
"	53	"	Holland	m	5	2	2		3	49	3	"
"	43	Holland	"	m	2	2	2		3	52		
"	41	U. S.	U. S.	m	3	3	4		4	49	3	sick
"	38	"	"	m	2	2	2		3	52		
"	34	Canada	Holland	m	2	4	2		3	50	2	sick
"	39	U. S.	Germany	m	3	3	3		4	49	3	"
"	54	"	Scotland	m	6	1	1		2	43	4	"
"	50	"	U. S.	m	5	1	1		2	52		
"	26	"	"	m	1	1			2	52		
Helper	26	"	Germany	m	1				1	52		
"	47	Canada	England	m	4	4	4		5	52		
Boiler maker	51	U. S.	Germany	wr	5	1		1	2	48	4	sickness
Helper	52	Germany	"	wr	5					48	4	sick
Boiler maker	61	"	"	wr	6					40	12	"
Helper	23	U. S.	U. S.	s						49	3	"
Boiler maker	26	"	"	s						52		
"	22	"	"	s						52		
"	23	"	"	s						52		
Rivet boy	18	Germany	Germany	s						50	2	sick
"	16	U. S.	"	s						52		
Boiler maker	25	"	U. S.	s			1	1	1	52		
"	23	Canada	England	s						49	3	sick
"	20	U. S.	U. S.	s						52		
DAVIES' IRON WORKS.												
Foreman	43	"	"	m	3	3	2		4	51	1	sick
Machinist	40	Germany	Germany	m	5	5	4		6	50	2	"
"	53	Holland	Holland	m	7	2	2		3	49	3	"
"	37	U. S.	Germany	m	3	3	3		4	49	3	"
"	27	Holland	Holland	m	2	2		1	4	50	2	sickness
"	32	U. S.	"	m	3	1	1		5	51	1	sick
"	36	"	U. S.	m	4	4	3		5	52		

TABLE No. 11.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other source.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$390 00		\$390 00					\$175		\$3 50				7		\$200
9 00	468 00		468 00					225		4 00				7		350
7 50	\$47 50		\$47 50							3 50				16		
7 50	\$67 50		\$67 50					35		3 50				7		45
12 00	576 00		576 00					175		4 00				15		200
9 00	423 00		423 00					*		*						
9 00	441 00		441 00					175		3 50				9		250
18 00	936 00		936 00	\$750				150	\$12 00					11	\$300	1000
16 50	\$58 00		\$58 00	750	\$900			\$100			\$2000					1600
15 00	750 00		750 00	700				50	8 00					7	60	600
15 00	735 00		735 00	650	800	\$300	80					1	\$5 00	9	100	1000
15 00	780 00		780 00	680	1600		100				1000					2500
10 50	525 00		525 00	500					8 00		1000					680
15 00	750 00	\$182	932 00	760	1200	200	168									1800
15 00	690 00		690 00	655	1000		85					1	5 00	16	100	1600
15 50	675 00		675 00	675					10 00							500
15 00	735 00		735 00	700					10 00					7	30	500
15 00	735 00		735 00	575	1000	100	160									1800
15 00	750 00	40	790 00	650				125	10 00							1400
15 00	735 00		735 00	680					10 00							600
15 00	780 00		780 00	650				125	9 00					8	150	900
14 00	696 00		696 00	700					9 00							650
15 00	780 00		780 00	650	900		125		10 00							1500
15 00	750 00		750 00	740					10 00			1	5 00	17		800
13 50	\$61 50		\$61 50	690					9 00			1	5 00			650
12 00	576 00		576 00	600					8 00			1	5 00			700
13 50	702 00		702 00	600	1200		100					1	5 00			1800
12 00	624 00		624 00	600					10 00		1000					700
9 00	468 00		468 00	460					8 00			1	5 00			600
10 50	546 00		546 00	540					9 00					6	150	800
15 00	720 00		720 00	700					10 00		1000	1	5 00			800
9 00	432 00		432 00					200		3 50				14	120	1000
12 00	480 00	48	528 00					125		3 50				32	25	500
9 00	441 00		441 00					80		3 50						250
15 00	780 00		780 00					300		4 00						900
12 00	624 00		624 00					200		4 00						500
12 50	702 00		702 00					280		4 00						500
6 00	300 00		300 00					*		*				12		
6 00	\$12 00		\$12 00					430		3 50						750
15 00	780 00		780 00	7 J				800		3 50				5		450
12 50	\$61 50		\$61 50					200		3 50						200
12 00	624 00		624 00													
18 00	918 00	200	1118 00	742	1500		300	75			2000					3000
15 00	750 00		750 00	675				70	9 00					11	80	800
15 00	785 00		785 00	625	800		100							13	100	1800
15 00	785 00		785 00	680					10 00							700
15 00	750 00		750 00	740					9 00		1000			14		660
15 00	765 00		765 00	725	800		40				3000					1400
15 00	780 00		780 00	700	1000			80								2000

* Lives at home and gives wages to parents.

TABLE No. 11.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machinist	23	U. S.	Canada	m				1	2	52		
"	49	Germany	Germany	m	5	3	2		4	46	6	sick
"	41	U. S.	England	m	5	3	3	1	5	52		
"	50	Holland	Holland	m	7	1	1	1	3	50	2	sick
"	44	Scotland	Scotland	m	5	4	3		5	52		
"	47	U. S.	Germany	m	5	1	1	2	4	52		
"	36	"	U. S.	m	2	2	2		3	48	4	sick
"	30	"	Holland	m	3	3	1		4	50	2	"
Helper	41	"	Germany	m	3	3	3		4	50	2	"
Machinist	27	Germany	"	m	3	3			4	49	3	sickness
Helper	40	U. S.	Holland	m	4	4	4		5	49	3	sick
Machinist	45	"	U. S.	m	5	1	1		2	47	5	sickness
Helper	41	Holland	Holland	m	4	3	2		4	51	1	sick
Machinist	33	U. S.	U. S.	m	4	1			2	46	6	sickness
Helper	42	Germany	Germany	wr	8	3	2		3	50	2	"
Machinist	20	U. S.	U. S.	s						52		
"	22	"	Canada	s						49	3	sick
"	19	"	Germany	s						49	3	"
"	21	"	U. S.	s						52		
"	19	"	Holland	s						52		
"	28	"	U. S.	s						47	5	sick
LAKESIDE IRON CO.												
Machinist	42	"	"	m	5	5	4		6	52		
"	26	"	"	m	2	2		1	4	52		
"	42	"	Canada	m	3	3	3		4	49	3	sick
"	38	"	England	m	5	3	3	1	5	50	2	"
"	45	Germany	Germany	m	4	4	3		5	49	3	"
"	39	Holland	Holland	m	6	6	4		7	47	5	"
"	43	U. S.	"	m	6	4	3		5	50	2	sickness
"	36	Canada	Germany	m	5	3	2		4	52		
"	26	U. S.	"	m					1	52		
"	29	"	U. S.	m	1	1			2	52		
Helper	46	Scotland	Scotland	m	4	2	1		3	49	3	sick
Machinist	25	U. S.	England	m	1	1		2	4	52		
Molder	32	"	Germany	m	4	4	2	1	6	52		
"	48	Germany	"	m	7	4	3		5	48	4	sick
Laborer	40	Holland	Holland	m	4	4	4	1	6	49	3	"
Pattern maker	35	U. S.	U. S.	m	3	3	2		4	52		
Machinist	52	Germany	Germany	wr	5	1	1		1	50	2	sick
Book-keeper	23	U. S.	U. S.	s						52		
Machinist	19	"	"	s						50	2	sick
"	21	"	"	s						49	3	"
"	20	"	Canada	s						50	2	"
"	19	"	Scotland	s						50	2	"
Laborer	22	"	Holland	s						48	4	"
Molder	23	"	U. S.	s						51	1	holidays
Laborer	20	"	Canada	s						47	5	sick

TABLE No. 11.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
15 00	\$780 00		\$780 00	\$700	\$1200			\$60			\$2000					\$1800
15 00	690 00		1055 00	750	1800			\$300						23	\$90	2500
15 00	780 00		780 00	720	1400	\$250	50									1800
15 00	750 00		750 00	650	900	200	100					1	\$5 00	20	120	1600
15 00	780 00		780 00	700	1400		75							19	200	2100
15 00	780 00		820 00	750	2000		200				2000	1	5 00			3200
16 50	792 00	40 96	888 00	675	1500		185				1000					3600
15 00	750 00		750 00	650				100	\$8 00			1	5 00			900
9 00	450 00		450 00	450					7 00							550
15 00	735 00		735 00	725					8 00					5	150	600
13 50	661 50		661 50	650	800	200										1200
14 25	669 75		669 75	650	800											1300
9 00	459 00		459 00	455					7 00					16	25	500
15 00	690 00		690 00	680					8 00							700
10 25	512 50		512 50	500	800									19	100	1300
7 50	390 00		390 00					75		\$4 00						100
9 00	441 00		441 00					125		4 00						300
7 50	367 50		367 50					*		*						
13 50	702 00		702 00					300		4 00						500
9 00	468 00		468 00					225		3 50						300
13 50	634 50		634 50					300		4 00						1000
21 00	1092 00	181	1223 00	780	1800			400			3000					3600
15 00	780 00		780 00	750	900	150	25									1500
18 00	882 00	30	912 00	672	1600		200	40			3000					2700
16 50	825 00		825 00	725	1400	200	100				1000	1	5 00			2500
16 50	808 50		808 50	700				80	12 00		2000	1	5 00	15	130	1800
15 00	705 00		705 00	665				40								
15 00	750 00	300	1050 00	750	1200		200	100	10 00			1	5 00	19	50	2500
15 00	780 00		780 00	675	900	150	100				1000	1	5 00	10	100	700
13 50	702 00		702 00	700	700						2000	1	5 00			1100
13 50	702 00		702 00	600				100	8 00		1900	1	5 00			800
9 00	441 00	200	641 00	640					8 00					22	60	650
15 00	780 00		780 00	700	1000	250	75				2000					1500
16 50	858 00		858 00	750	1300		100				1000	1	5 00			1800
15 00	720 00		720 00	720					9 00			1	5 00	12	50	600
12 00	588 00		588 00	580					8 00					9	75	650
16 50	858 00		858 00	700	1500		150				2800					3200
15 00	750 00		750 00	650	900		100							13	120	1800
15 00	780 00		780 00					300		4 00						800
6 00	300 00		300 00					*		*						
13 50	661 50		661 50					300		4 00						350
9 00	450 00		450 00					140		4 00						200
6 00	300 00		300 00							4 00						
9 00	432 00		432 00					200		3 50						350
12 00	612 00		612 00					250		3 50						400
7 50	352 50		352 50					100		3 00						150

* Lives at home and gives wages to parents.

MUSKEGON.

One hundred and forty-three employes were canvassed: Lakeside Iron Co., (manufacturers of machinery) 25; Davies Iron Works, 28; Johnston Bros. & Co. (manufacturers of boilers and refuse burners), 35; Rodgers Iron Manufacturing Co. (manufacturers of saw mill machinery, steam engines and steam pumps), 55.

Nationality: Americans, 79; Canadians, 11; Hollanders, 18; Germans, 24; Scotchmen, 5; Swedes, 2; Norwegian, 1; Swiss, 2; Englishman, 1. 55+per cent are Americans and 45-per cent foreigners. Of the foreigners 17+per cent are Canadians; 28+per cent Hollanders; 38-per cent Germans; 8-per cent Scotchmen; 3+per cent Swedes; 3+per cent Swiss; 1+per cent Norwegians; 1+per cent Englishmen. Parentage of those born in the United States: American, 39; German, 13; English, 5; Canadian, 10; Holland, 9; Scotch, 2; Norwegian, 1. 49+per cent have American and 51+per cent foreign parents. 95 employes are married, 39 single and 9 widowers. 66+per cent are married; 27+per cent single and 6+per cent widowers. 41 support self only; 1 supports others than self by boarding, and 101 support families: Americans, 53; Canadians, 7; Hollanders, 16; Germans, 16; Scotchmen, 4; Swedes, 2; Norwegian, 1; Swiss, 1; Englishman, 1. In 101 families there are 371 children, of whom 238 are supported. 7 married men, all Americans, have no children. Of the children supported 31 are under 5 years of age; 205 are 5 and under 20, and 2 are over 20. 168 attend school, which is 80+per cent of school age. 135 or 80+per cent attend the public schools; 33 parochial. Number of persons supported in families, 362; by boarding, 1. 27 employes support 30 persons besides wife and children. Total number of weeks worked during the year, 7,098, average, 49.6+-. 97 men or 68-per cent lost 338 weeks or 6 years and 26 weeks. Cause of lost time: sickness, 95; at school, 1; holidays, 1. Total annual earnings, \$93,456.75; average, \$653.54. Total income from other resources, \$2,947, as follows: Family earnings, \$1,697; pensions, \$48; interest, \$290; rent, \$912. Total annual earnings of Americans, \$52,590.25; average, \$665.69; Canadians, \$7,021.50; average, \$638.31; Hollanders, \$11,755.50; average, \$653.08; Germans, \$14,988.50; average, \$624.52; Scotchmen, \$3,147; average, \$629.40; Swedes, \$1,485; average, \$742.50; Norwegian, \$450; average, \$450; Swiss, \$1,155; average, \$577.50; Englishman, \$864; average, \$864. Average weekly wages of married men, \$14.30; single men, \$9.96; all employes, \$13.11. Wages paid per week: One employe, \$4; five, \$6; seven, \$7.50; one, \$8; nineteen, \$9; one, \$10.25; six, \$10.50; eleven, \$12; fifteen, \$13.50; one, \$14; one, \$14.25; fifty-seven, \$15; nine, \$16.50; seven, \$18; one, \$21; one \$24. Total family expenses, \$66,327; per capita, \$143.25: Americans, \$35,030; per capita, \$152.97; Canadians, \$4,640; per capita, \$118.87; Hollanders, \$9,883; per capita, \$123.52; Germans, \$10,680; per capita, \$144.32; Scotchmen, \$2,715; per capita, \$150.83; Swedes, \$1,395; per capita, \$126.82; Norwegians, \$630; per capita, \$157.50; Swiss, \$630; per capita, \$210; Englishmen, \$724; per capita, \$144.80. Number owning homes, 54: Americans, 35; Canadians, 2; Hollanders, 4; Germans, 9; Scotchman, 1; Norwegian, 1; Swiss, 1; Englishman, 1. 52 married men and 2 widowers own homes. 55-per cent of married men own homes. 65-per cent of home owners are Americans and 35+per cent foreigners. Total value of homes, \$62,700; average, \$1,161.11: Americans, \$44,400; average, \$1,268.57; Canadians, \$1,700; average, \$850; Hollanders, \$3,400; average, \$850; Germans, \$8,900; average, \$988.88; Scotchman, \$1,400; average, \$1,400; Norwegian, \$900; average, \$900; Swiss, \$900; average, \$900; Englishman, \$1,200; average, \$1,200. The homes of 17 employes are mortgaged, which is 31+per cent. Value of mortgaged homes, \$16,800; mortgaged for \$3,850; which is 23-per cent of valuation. The homes of 10 Americans are mortgaged for \$2,150; 2 Canadians, \$400; 1 Hollander, \$200; 3 Germans, \$800; 1 Swiss, \$300. During the year

41 employes made payments and improvements upon homes amounting to \$4,998, and 59 men saved \$10,210 in money. Total number of employes who saved, 95, which is 66+per cent. Total savings, including payments and improvements upon homes, \$15,208, which is 16+per cent of total earnings. Total present worth of 134 employes (9 not reporting), \$157,580, average, \$1,175.97. Americans, 72; total, \$100,505; average, \$1,395.90; Canadians, 11; total, \$8,480; average, \$770.90; Hollanders, 18; total, \$13,295; average, \$738.61; Germans, 22; total, \$25,000; average, \$1,136.36; Scotchmen, 5; total, \$4,300; average, \$860; Swedes, 2; total, \$1,100; average, \$550; Norwegian, 1; total, \$1,300; Swiss, 2; total, \$1,400; average, \$700; Englishmen, 1; total, 2,200; average, \$2,200. One employe is worth \$6,000. 19 Germans had \$1,850 upon arrival in this country; 13 Hollanders, \$1,090; 7 Canadians, \$740; 4 Scotchmen, \$365; 2 Swedes, \$95; 1 Norwegian, \$150; 1 Swiss, \$80; 1 Englishman, \$600. Total present worth of foreigners, \$57,075. Number renting homes, 47: Americans, 18; Canadians, 5; Hollanders, 12; Germans, 7; Scotchmen, 3; Swedes, 2. One single man and 3 widowers are renters. 44+per cent of married man and 33-per cent of total employes rent. Total monthly rent, \$417; average, \$8.87. Total annual rent, \$5,004; average, \$106.46. Per cent of rent to earnings, 16+. Per cent of rent to expenses, .17-. Total monthly rent of Americans, \$155; average, \$8.61; Canadians, \$48; average, \$9.60; Hollanders, \$102; average, \$8.50; Germans, \$64; average, \$9.14; Scotchmen, \$28; average, \$9.33; Swedes, \$20; average, \$10.

Number of employes boarding, 35, which is 25-per cent of total. 7 live at home and give wages to parents. Total weekly board, \$129.10; average, \$3.69; Americans, 20; total, \$75.10; average, \$3.75; Canadians, 4; total, \$14.50; average, \$3.62; Hollanders, 2; total, \$7; average, \$3.50; Germans, 7; total, \$25.50; average, \$3.64; Scotchmen, 1; total, \$3.50; Swiss, 1; total, \$3.50. 17 employes keep an itemized account of their expenses, which is 12-per cent. 88 own sewing machines, which is 87+per cent of those supporting families. 38 own musical instruments, which is 26+per cent. Number of musical instruments: Pianos, 5; organs, 28; violins, 5; guitars, 2. Number who take newspapers and magazines, 108: Americans, 66; Canadians, 9; Hollanders, 11; Germans, 17; Scotchmen, 3; Norwegian, 1; Englishman, 1. 75+per cent take newspapers, of which 61+ are Americans. Number of dailies taken, 93; story, 2; religious, 11; labor, 3; scientific, 1; local and other weekly paper, 72; magazines 5.

Sixty-five work at hand and 57 at machine work and 21 at both. 17 reported that their labor organization had been of financial benefit to them, and 12 no financial benefit. Other than financially, 28 reported no benefit. 34 carry life insurance amounting to \$60,000; average, \$1,764.71; Americans, 27; total, \$51,000; Germans, 4, total, \$6,000; Hollanders, 2; total, \$2,000; Canadians, 1; total, 1,000. 24-per cent of employes are insured. 29 belong to benefit societies: Americans, 14; total \$70; average, \$5; Germans, 7; total, \$35; average, \$5; Hollanders, 4; total, \$20; average, \$5; Canadians, 4; total, \$20; average, \$5. Total weekly benefit, \$145; average, \$5, 20+per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES
IN
THREE RIVERS.

TABLE No. 12.—Showing the Individual Reports

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
SHEFFIELD VELOCIPED CAR CO.												
Car Builder	48	U. S.	U. S.	m				1	2	48	4	sick
Painter	33	"	"	m	1	1			2	52		
"	21	"	"	m					1	48	9	laid off
Machinist	21	"	"	m					1	50	2	shut down and vacation
"	65	"	"	m					1	39	13	laid off
Laborer	35	"	"	m	4	4	3		5	49	3	"
Wood worker	40	"	"	m	2	2	2		3	50	2	laid off and sick
Laborer	43	"	"	m	2	2	2		3	48	1	laid off
Painter	24	"	"	m	1	1	1		2	46	6	laid off & out of work
"	32	"	"	m	1	1			2	47	5	laid off
Puttler	47	"	"	m	3	3	2		4	48	4	"
"	43	"	"	m	3	3	2		4	48	4	"
"	44	"	"	m					1	46	6	sick and laid off
Driller	31	"	"	m	2	2			3	48	4	vacation
"	24	"	"	m	1	1			2	35	17	out of work
Machinist	29	"	"	m					1	50	2	laid off
"	25	"	"	m					1	43	9	sick and laid off
"	30	"	"	m					1	49	3	laid off
Blacksmith	27	"	"	m	1	1			2	49	3	laid off and vacation
"	38	"	"	m	2	2	2		3	49	3	sick and laid off
Machinist	38	"	"	m	1	1			2	50	2	laid off
"	35	"	"	m	1	1			2	49	3	"
"	23	"	"	m					1	48	4	"
"	34	Canada	"	m	3	3	2		4	50	2	"
"	31	U. S.	"	m	1	1	1		2	50	2	holidays and laid off
Carpenter	51	"	"	m				1	2	51	1	holidays
Machinist	29	"	"	m	2	2	2		3	51	1	holidays and sick
"	45	"	"	m	3	2	1	1	4	50	2	laid off
"	25	"	"	m	1	1			2	51	1	sick
"	32	"	"	m	2	2			3	39	13	out of work
"	30	"	"	m	3	3			4	49	3	laid off
Laborer	35	"	"	m	2	2	2		3	49	3	"
Blacksmith	35	"	"	m	2	2			3	50	2	holidays and laid off
"	59	"	"	m	1				1	50	2	laid off
"	38	"	"	m	5	5	4		6	35	17	out of work
"	36	"	"	m	4	4	2		5	50	2	laid off
Iron worker	35	"	"	m				2	3	43	9	vacation and laid off
Blacksmith	53	"	"	m					1	50	2	laid off
"	36	"	"	m	1	1	1		2	46	6	"
"	28	"	"	m					1	50	2	"
Wood worker	43	"	"	m	2	2	2		3	48	4	vacation
"	66	"	"	m				1	2	49	3	laid off
Pattern maker	55	"	"	m	2	1	1	1	3	50	2	holidays and laid off
Molder	44	"	"	m	9	9	7		10	52		
Wood worker	33	"	"	m	1	1	1		2	44	8	laid off
"	30	"	"	m	3	3	2		4	49	3	"
"	23	"	"	m					1	44	8	sick and laid off
"	29	"	"	m	2	2	1		3	47	5	"

of the Employés Canvassed in Three Rivers.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born. No. of years in United States.	If foreign born amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$10 50	\$504 00	\$146	\$650 00	\$450	\$1500	\$150	\$200								\$2000
12 00	624 00		624 00	444	1500	1130	180								1500
6 75	280 25		280 25	285					\$25	\$5 00					800
8 00	400 00		400 00	395			5								1000
10 50	409 50	15	424 50	424	2000							1	\$2 00		2500
8 30	406 70	44	450 70	442	600		8				\$150				1250
10 00	530 00		530 00	489	500	450	61								250
6 75	324 00		324 00	324	800					8 00					900
6 75	310 50		310 50	310											275
6 75	317 25		317 25	257	400		5	75							500
8 00	384 00		384 00	259	1500		50	75			1000				2000
8 00	384 00		384 00	484					8 50						1500
9 00	414 00	150	564 00	324	450		15	225							2000
8 00	384 00	100	484 00	339				85	5 00						300
6 75	236 25		236 25	268					6 00						150
9 00	450 00		450 00	326	1000	150	124								1000
9 00	387 00		387 00	317				70	6 00						300
9 00	441 00		441 00	381				60	5 00						200
8 00	386 90		386 90	246				150	6 00						350
10 50	514 50		514 50	504	1000	500	10								900
9 00	450 00	750	1200 00	806	800		15	879							2000
8 00	362 00		362 00	264		250	128								450
6 75	324 00	70	394 00	304	750										2000
7 50	375 00	20	395 00	353	1600	550	41				1000				1400
9 00	450 00		450 00	250	1000		200				2500	1	12 50		2000
13 50	688 50		688 50	588	800	78	100				1000	1	15 00		1500
9 00	459 00		459 00	384	500	850	75				150	1	5 00		500
8 00	400 00	72	472 00	472					6 00						500
10 50	535 50		535 50	444				91	6 50						150
15 00	702 00	90	792 00	637				153	5 00						480
6 75	330 75		330 75	285	250	175	45								500
6 75	330 75		330 75	305	450		25								300
8 00	400 00		400 00	400					6 00						3000
18 00	900 00	100	1000 00	700				300	8 00		2000				500
8 25	288 75		288 75	288	400										
13 50	675 00		675 00	675					7 00		1500				200
12 00	516 00		516 00	341				175	free						500
8 00	400 00		400 00	350				50	free						2800
12 00	579 60	50	629 60	480	800	400	100	49							700
9 00	450 00		450 00	413				35	6 00		8100	1	5 00		450
10 00	480 00	72	552 00	527	1500	100	25				2000				2000
9 00	441 00		441 00	401	950		40								1300
12 00	600 00	96	696 00	621				75	7 00		1000	1	3 00		1400
18 50	702 00		702 00	602	600	350	100								650
9 00	396 00		396 00	396					6 00		1000				200
8 00	392 00		392 00	337	350	300	55								200
8 00	352 00		352 00	292				60	5 00						450
8 50	399 50		399 50	359	700	300	40				1000				500

TABLE No. 12—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machinist	27	U. S.	U. S.	m	1	1	1	1	3	46	6	sick and laid off
Grinder	37	"	"	m	1	1	1	1	3	49	3	laid off
Wood worker	47	"	"	m	1	1	1	1	6	49	3	"
"	31	Germany	Germany	m	1	1	1	1	1	50	2	"
"	47	U. S.	U. S.	m	1	1	1	1	1	52		
"	26	"	Holland	m	1	2	1	1	3	43	9	sickness and laid off
"	31	"	U. S.	m	1	2	1	1	3	46	6	laid off
"	37	"	"	m	1	2	2	1	3	40	12	sick and laid off
"	58	"	"	m	1	1	1	1	1	46	6	laid off and vacation
"	37	"	"	m	1	1	1	1	2	49	3	laid off
Painter	35	"	"	m	1	1	1	1	1	48	4	sick and laid off
Teamster	42	"	Scotland	m	1	2	2	1	3	50	2	laid off
Engineer	66	Germany	Germany	m	1	2	1	1	3	51	1	sick
Laborer	53	U. S.	U. S.	m	1	2	1	1	3	46	6	laid off
Molder	24	"	"	m	1	1	1	1	2	45	7	sick and laid off
"	21	"	"	m	1	1	1	1	1	44	8	laid off
"	23	"	"	m	1	2	1	1	3	49	3	sickness, and holiday
Core maker	22	"	"	m	1	1	1	1	1	43	9	sick
Laborer	42	"	"	m	1	1	1	1	2	48	4	accident and laid off
Molder	26	"	"	m	1	1	1	1	2	50	2	laid off
"	83	"	"	m	1	1	1	1	2	46	6	"
"	32	"	"	m	1	1	1	1	1	43	9	"
Wood worker	82	"	"	m	1	1	1	1	1	50	2	"
Laborer	28	"	"	m	1	1	1	1	2	48	4	out of work
Carpenter	45	"	"	m	1	2	1	1	3	52		
Laborer	42	"	"	m	1	2	1	1	3	48	4	laid off
"	48	"	"	m	1	2	2	1	3	49	3	"
Teamster	31	"	"	m	1	2	1	1	3	50	2	"
Wood worker	28	"	"	m	1	1	1	1	2	50	2	"
"	89	"	"	m	3	3	2	2	4	48	4	laid off and vacation
Machinist	22	"	"	s	1	1	1	1	2	50	2	laid off
Wood worker	29	"	"	s	1	1	1	1	2	46	6	"
Painter	24	"	"	s	1	1	1	1	3	49	3	sick and laid off
Machinist	18	"	"	s	1	1	1	1	2	49	3	laid off
Core maker	13	"	"	s	1	1	1	1	2	48	4	sick
Molder	16	"	"	s	1	1	1	1	1	46	6	sick and laid off
Machinist	19	"	Germany	s	1	1	1	1	1	50	2	laid off
Machine hand	14	Germany	"	s	1	1	1	1	1	39	13	at school
Machinist	20	U. S.	U. S.	s	1	1	1	1	1	50	2	laid off
"	24	"	Germany	s	1	1	1	1	1	50	2	"
Painter	39	"	U. S.	s	1	1	1	1	2	48	4	"
Machinist	23	"	"	s	1	1	1	1	1	39	13	"
"	18	"	"	s	1	1	1	1	1	39	13	out of work
"	19	"	Germany	s	1	1	1	1	1	49	3	laid off
"	18	"	U. S.	s	1	1	1	1	1	43	9	"
"	16	"	"	s	1	1	1	1	1	48	4	laid off and sick
"	20	"	"	s	1	1	1	1	1	50	2	laid off
"	21	"	"	s	1	1	1	1	1	48	4	laid off and sick
"	19	"	"	s	1	1	1	1	1	46	6	sick and laid off
"	16	"	"	s	1	1	1	1	1	26	26	at school
"	21	"	"	s	1	1	1	1	1	52		
Blacksmith	24	"	"	s	1	1	1	1	1	48	4	laid off
Pattern maker	29	"	"	s	1	1	1	1	1	49	3	out of work

TABLE No. 12.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$0 00	\$414 00		\$414 00	\$335	\$500	\$360	\$89									\$365
8 00	392 00		392 00	322	500	20	70									475
8 70	426 30	\$166	592 30	577	1000	650	15									500
9 48	474 00		474 00	354	550		120									800
18 00	966 00	40	976 00	480	1200			\$496			\$1000	1	\$25 00	25		2000
12 00	516 00		516 00	851	700	100	165									900
10 50	488 00		488 00	488					\$6 00		1000					100
9 00	860 00		860 00	280	650	250	100				1000					700
12 00	552 00		552 00	377	1500	300	175				1000					2000
9 00	441 00		441 00	351	800	400	15	75								500
9 00	432 00		432 80	282	900		150									1500
7 50	375 00		375 00	375	500	250										500
7 50	882 50	225	607 50	507	1400		100				2000				30	2000
7 50	345 00		345 00	345	350										\$200	500
9 00	405 00		405 00	355				50	6 50							200
7 50	380 00		380 00	380					free							400
12 00	568 00		568 00	263	1500		250	75								1700
9 00	387 00		387 00	687					4 00							300
8 00	384 00		385 00	359	800		25									500
10 80	540 00		540 00	420	800	500	120									400
9 00	414 00		414 00	414					7 00							325
12 00	516 00		516 00							\$3 00						100
8 00	400 00		400 00	\$10				90	5 50							1200
8 40	403 20		403 20	383	400	200	70									500
10 80	561 60		561 60	486	600	200	75				1000					1600
6 75	324 00		324 00	342					4 00							150
6 75	390 75		390 75	314	1100	150	16					1	70			1500
12 00	600 00		600 00	600					7 00							400
10 50	525 00		525 00	325				200	5 80		1000					500
9 00	432 00		432 00	277	900	600	155									700
9 00	450 00		450 00	450					3 00							75
9 00	414 00		414 00					75		3 25						400
7 50	367 50		367 50	367						++						100
5 40	264 60		264 60	264						++						100
3 00	144 00		144 00					*		++						
3 50	161 00		161 00					*		*						
6 75	337 50		337 50					*		*						100
4 50	175 50		175 50					*		*						
6 75	337 50		337 50				25			+						100
9 00	450 00		450 00							+						300
7 50	360 00		360 00	360					5 00							1500
7 50	292 50		292 50							3 50						210
4 50	175 50		175 50							3 00						
7 80	382 20	25	407 20					100		free						800
4 50	193 50		193 50					25		2 00						150
5 40	259 20		259 20							3 00						
4 50	225 00		225 00							2 00						125
6 75	324 00		324 00							3 00						2500
7 50	345 00	20	365 00							3 00						200
4 50	117 00		117 00					25		2 00						
7 50	360 00		360 00							3 50						700
7 00	336 00		336 00							3 00						125
9 25	453 25	75	528 25					140		3 50						8000

* Lives at home and gives wages to parents.
 † Lives at home and supports family.

‡ Lives at home and pays no stated amount for board.

TABLE No. 12.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Wood worker	19	U. S.	U. S.	s	—	—	—	—	—	48	4	sick and laid off
Molder	17	"	Germany	s	—	—	—	—	—	47	5	holidays and laid off
Laborer	21	"	U. S.	s	—	—	—	—	—	43	9	laid off
Wood worker	24	"	"	s	—	—	—	—	—	40	12	sick and laid off
"	17	"	"	s	—	—	—	—	—	39	13	"
ROBERTS, THEOP & Co.												
Laborer	15	"	"	s	—	—	—	—	—	35	17	out of work
Machinist	30	"	"	s	—	—	—	—	—	35	17	"
Painter	34	"	"	m	4	4	2	—	5	43	9	"
"	44	"	"	m	4	4	3	1	6	48	4	vacation
Machinist	39	Germany	Germany	m	4	4	3	—	5	52	—	—
Wood worker	69	U. S.	U. S.	m	—	—	—	—	1	35	17	out of work
Machinist	39	"	"	m	1	1	1	—	2	50	2	shut down
Wood worker	54	Germany	Germany	m	2	2	2	—	3	52	—	—
Molder	32	U. S.	"	m	2	2	—	1	2	52	—	—
Wood worker	28	"	U. S.	m	2	2	2	—	3	52	—	—
"	45	"	"	m	4	4	1	—	5	52	—	—
Molder	41	"	"	m	3	3	3	—	4	25	17	sick and out of work
"	32	"	"	m	2	2	—	—	3	50	2	not answered
Machinist	23	"	"	m	2	2	—	—	3	35	17	out of work
Blacksmith	30	"	Germany	m	1	1	—	—	2	52	—	—
"	59	"	U. S.	m	—	—	—	1	2	50	2	laid off and sick
Machinist	28	Germany	Germany	m	1	1	—	—	2	52	—	—
Wood worker	38	U. S.	U. S.	m	3	3	2	—	4	50	2	vacation
ASPINWALL MFG. Co.												
Engineer	33	"	"	s	—	—	—	1	1	39	13	out of work
Machinist	23	"	"	s	—	—	—	—	—	44	8	laid off
"	22	"	"	s	—	—	—	—	—	35	17	accident and laid off
"	34	"	"	s	—	—	—	—	—	35	17	laid off
"	35	"	England	m	1	1	1	—	2	52	—	—
Painter	38	"	U. S.	m	2	2	1	—	3	26	26	out of work
"	33	"	"	m	2	2	1	—	3	35	17	sick and laid off
Machinist	26	"	"	m	—	—	—	—	1	39	13	laid off
"	32	"	"	m	—	—	—	—	1	13	39	out of work
Blacksmith	47	"	"	m	2	2	2	—	3	9	43	laid off
"	22	"	"	m	—	—	—	—	1	26	26	out of work
Wood worker	43	"	"	m	2	2	—	—	3	50	2	laid off
"	45	"	"	m	—	—	—	—	1	50	2	vacation
Machinist	33	"	"	m	3	3	2	—	4	25	26	out of work
"	30	"	"	m	—	—	—	1	2	50	2	vacation

TABLE No. 12.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
36 00	\$288 00	850	\$338 00							\$2 00						\$125
4 50	211 50		211 50							3 00						50
5 40	232 20		232 20							1 50						100
10 50	420 00		420 00							3 50						100
6 00	234 00		234 00					\$15								
4 50	157 50		157 50					*								
9 00	815 00		315 00							3 00						400
7 00	801 00		301 00	\$241	\$300	\$25	\$30									500
12 00	576 00		576 00	576					\$10 00							1200
7 50	390 00		390 00	390					4 00					21		500
10 00	350 00		350 00	340	1000		10									1300
12 00	600 00		600 00	400	700	250	200									1000
15 00	780 00	200	980 00	680	2500	500	300				\$1000			25	\$300	5000
12 50	702 00		702 00	702					free							500
9 00	499 20	35	534 20	326	1000		208									1500
10 50	546 00	71	617 00	607	250	140	10									200
7 50	262 50		262 50	262					6 50							150
12 00	600 00		600 00	382	500	150	88	150								550
12 00	420 00		420 00	253	1200	600	115	52								800
11 80	613 60		613 60	463	600	350	150									400
10 25	512 50		512 50	512					5 00							150
11 40	592 80		592 80	292	1500		300							28		2000
11 40	570 00		570 00	553	800		17									1000
9 00	351 00		351 00	351												75
6 75	297 00		297 00					25		2 50						200
9 00	315 00		315 00							4 00						100
6 75	236 25		236 25							2 75						75
15 00	780 00		780 00	642	700	400	88	50								400
9 00	234 00		234 00	234	650											800
10 50	367 50		367 50	367					4 00							400
10 50	409 50		409 50	290	3000	1200	150					1	\$8 00			2000
10 50	136 50		136 50	217					4 00							350
12 00	108 00		108 00	258	500											900
12 00	312 00		312 00	287	175	30	25									200
9 00	450 00	140	590 00	590					6 00		1000					200
9 00	450 00	24	474 00	349	800		25	100			1000					1500
10 50	273 00		273 00	843	500	300										400
12 00	600 00		600 00	550				50	8 38							300

* Lives at home and gives wages to parents.

† Lives at home and supports family.

THREE RIVERS.

One hundred and thirty-nine employes were canvassed: Aspinwall Manufacturing Co. (manufacturers of potato planters and potato diggers), 15; Roberts, Throp & Co (manufacturers of threshing machines, powers and corn shellers), 18; Sheffield Velocipede Car Co. (manufacturers of hand, push and velocipede cars, locomotive stand pipes, switches and electric street car trucks), 106.

Nationality: Americans, 132; Germans, 6; Canadian, 1. 95-per cent are Americans and 5-per cent foreigners. Parentage of those born in the United States: American, 123; German, 6; Scotch, 1; Holland, 1; English, 1. 93-per cent have American and 7-per cent foreign parents. 104 employes are married, 34 are single and 1 widower. There are employed 1 boy 15, one 14 and one 13 years of age. 30 support self only, and 109 support families: Americans, 103; Germans, 5; Canadians, 1. In 109 families there are 159 children, of whom 154 are supported. 31 married men have no children: 30 are Americans and 1 German. Of the children supported 47 are under 5 years of age; 106 are 5 and under 20 and 1 is over 20. 88 attend school, which is 83-per cent of school age. All attend the public schools. Number of persons supported in families, 282. 18 employes support 24 persons besides wife and children. Total number of weeks worked during the year, 6,347; average, 45.6+. 126 men or 91-per cent lost 881 weeks or 16 years and 49 weeks. Cause of lost time: Sickness, 7; laid off, 57; laid off and sickness, 21; laid off and no work, 1; shut down and vacation, 1; vacation, 6; no work, 16; laid off and vacation, 4; holidays and laid off, 5; holidays, 2; accident and vacation, 2; at school, 2; sickness and no work, 1; shut down, 1. Total annual earnings, \$57,634.85; average, \$414.64. Total annual income from other resources, \$2,846, as follows: Family earnings, \$450; boarding, \$112; heirship, \$900; pensions, \$350; interest, \$366; rent, \$463; other sources, \$205. Total annual earnings of Americans, \$54,465.05; average, \$412.61; Germans, \$2,794.80; average, \$465.80; Canadian, \$375; average, \$375. Average weekly wages of married man, \$9.82; single man, \$6.64; all employes, \$9.04. Wages paid per week: One employe, \$3; one, \$3.50; seven, \$4.50; three, \$5.40; two, \$6; fifteen, \$6.75; two, \$7; twelve, \$7.50; one, \$7.80; thirteen, \$8; one, \$8.10; one, \$8.25; one, \$8.30; one, \$8.40; one, \$8.50; one, \$8.70; twenty-seven, \$9; one, \$9.25; one, \$9.48; one, \$9.60; two, \$10; one, \$10.25; twelve, \$10.50; one, \$10.60; three, \$10.80; two, \$11.40; fifteen, \$12; one, \$12.60; four, \$13.50; two, \$15; three, \$18.

Total family expenses, \$43,196; per capita, \$110.48; Americans, \$40,620; per capita, \$110.68; Germans, \$2,223; per capita, \$117; Canadians, \$353; per capita, \$70.60. Number owning homes, 66: Americans, 61; Germans, 4; Canadian, 1. All home owners are married men. 63-per cent of married men own homes. 92-per cent of home owners are Americans and 8-per cent foreigners. Total value of homes, \$56,475; average, \$855.68; Americans, \$48,925; average, \$802.05; Germans, \$5,950; average, \$1,487.50; Canadian, \$1,600; average, \$16,000. The homes of 39 employes are mortgaged, which is 59-per cent. Value of mortgaged homes, \$33,170; mortgaged for \$13,053, which is 39-per cent of valuation. The homes of 37 Americans are mortgaged for \$12,103; 1 German, \$500; 1 Canadian, \$450. During the year 55 employes made payments and improvements upon homes amounting to \$4,783, and 38 men saved \$4,752 in money. Total number of employes who saved, 82, which is 59-per cent. Total savings, including payments and improvements upon homes, \$9,535, which is 16-per cent of total earnings. Total present worth of 130 employes (9 not reporting), \$104,630; average, \$804.84; Americans, 124; total, \$92,930; average, \$749.43; Germans, 5; total \$10,300; average, \$2,060; Canadian, 1; total, \$1,400; average, \$1,400. One employe is worth \$5,000. Two Germans had \$400

upon arrival in this country. Total present worth of foreigners, \$11,700. Number renting homes, 36: Americans, 35; Germans, 1. Two renters are single men and 4 have rent free. 32+per cent of married men and 26-per cent of total rent. Total monthly rent, \$208.63; average, \$5.79. Total annual rent, \$2,503.56; average, \$69.54. Per cent of rent to earnings, .16-. Per cent of rent to expenses, .16-. Total monthly rent of Americans, \$204.63; average, \$5.84; Germans, total \$4; average, \$4.

Number of employes boarding, 22, which is 16-per cent of total. Five live at home and give wages to parents; 2 live at home and pay no stated amount for board, and 3 live at home and support family. Total weekly board, \$63.50; average, \$2.88; all Americans. 12 employes keep an itemized account of their expenses, which is 9-per cent. 91 own sewing machines, which is 83+per cent of those supporting families. 42 own musical instruments, which is 30+per cent. Number of musical instruments: Pianos, 4; organs, 18; melodeons, 3; violins, 6; organette, 1; horns, 3; bugle, 1; clarionets, 2; cornets, 2; bass viol, 1; banjos, 2; tuba, 1; baritone, 1; accordions, 3; piccolo, 1; trombone, 1; guitars, 2; music box, 1. Number who take newspapers and magazines, 109: Americans, 104; Germans, 4; Canadians, 1. 78+per cent take newspapers and magazines, of which 95+per cent are Americans. Number of dailies taken, 64; story, 9; sporting, 2; religious, 12; scientific, 15; local and other weekly papers, 126; magazines, 8; miscellaneous, 1.

Sixty-three work at hand and 49 at machine work, and 27 at both. Eight men or 6-per cent have been injured since engaged as employes. 23 carry life insurance amounting to \$28,400; average, \$1,234.78; Americans, 20; total, \$24,400; Germans, 2; total, \$3,000; Canadians, 1; total, 1. 17-per cent are insured. Nine belong to benefit societies (all Americans), which is 6+per cent. Total weekly benefit, \$76.20; average, \$8.46. 6 per cent belong to benefit societies.

A CANVASS
OF THE
AGRICULTURAL IMPLEMENT
AND
IRON WORKING INDUSTRIES

IN
ANN ARBOR, PLYMOUTH, ADRIAN, SAGINAW, MONTAGUE,
GRAND HAVEN, QUINCY, HOWELL, TECUMSEH,
FERRYSBURG, MARSHALL, JONES-
VILLE AND BUCHANAN.

TABLE No. 13.--Showing the Individual Reports of the Employés Canvassed in Ann
seh, Ferrysburg, Marshall,

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
ANN ARBOR AG'L CO., ANN ARBOR.												
Wood worker	41	U. S.	U. S.	m	3	3	2		4	50	2	vacation
"	53	"	"	m	8	4	3		5	43	9	laid off
"	30	"	"	s						41	11	"
Painter	44	"	"	s				1	1	26	26	"
"	19	"	"	s						26	26	sick and no work
"	18	"	"	s				1	1	48	4	laid off
Machinist	18	"	"	s						46	6	"
Molder	20	Germany	Germany	s						39	13	"
"	42	U. S.	U. S.	s				1	1	37	15	shut down
Core maker	18	"	"	s						39	13	laid off
Molder	16	"	England	s						39	13	no work
Laborer	35	"	U. S.	s						48	4	out of work
Molder	22	"	Germany	s						38	14	sick and laid off
"	18	"	Ireland	s						46	6	laid off
"	24	"	Germany	s						43	9	"
Wood worker	19	"	U. S.	s						32	20	"
Machinist	23	"	Germany	s						48	4	"
"	24	"	U. S.	s					2	26	26	out of work
Molder	58	Ireland	Ireland	wr						39	13	sick and laid off
Wood worker	38	Canada	U. S.	m	1	1			2	22	30	work on patent
Polisher	31	"	"	m	1	1	1		2	50	2	laid off
Pattern maker	72	U. S.	"	m					1	43	9	"
Laborer	40	Canada	"	m	1	1	1		2	51	1	"
"	28	Germany	Germany	m					1	26	26	out of work
Wood worker	52	U. S.	U. S.	m	2	2	1		3	52		
Machinist	32	England	England	m	3	3	2		4	46	6	sick and laid off
"	29	Germany	Germany	m	3	3	1	1	5	50	2	"
"	58	U. S.	U. S.	m	2	2	1		3	52		
Wood worker	27	"	"	m					1	52		
"	35	"	"	m	4	4	1		5	52		
Blacksmith	48	"	"	m	2	2	1		3	51	1	out of work
"	55	"	"	m	3	3	1		4	49	3	laid off
Painter	29	"	"	m	1	1		1	3	32	20	out of work
"	28	"	"	m	2	2			3	52		
"	42	"	"	m	2	2	2		3	52		
"	24	"	"	m					1	46	6	laid off
Teamster	40	"	"	m	2	2	2		3	39	13	out of work
Grinder	46	Canada	"	m	1	1	1		2	43	9	laid off
"	35	Ireland	Ireland	m	2	2	2		3	32	20	out of work
Machinist	34	U. S.	U. S.	m	1	1			2	39	13	laid off
Molder	57	"	"	m					1	39	13	laid off
"	33	"	U. S.	m	1	1			2	26	26	laid off and sick
"	56	England	England	m	2	2			3	46	6	laid off
Laborer	56	Germany	Germany	m	3	3	2		4	35	17	"
"	37	"	"	m	1	1	1		2	50	2	"

Arbor, Plymouth, Adrian, Saginaw, Montague, Grand Haven, Quincy, Howell, Tecum-Jonesville and Buchanan.

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount saved aside from payments on home.	Amount paid on home during the year.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$8 40	\$420 00		\$420 00	\$350	\$1000	\$600	\$70								\$1500
8 40	361 20	\$298	659 20	597	1200	200	62								1800
9 00	369 00		369 00							22 50					
6 00	156 00		156 00	256					+	*					400
6 00	156 00		156 00												50
6 00	288 00		288 00	288					2 50						
4 00	184 00		184 00							†					
6 00	234 00		234 00						†					18	
11 40	421 80		421 80	421	1500										2000
3 00	117 00		117 00						†						
9 00	351 00		351 00					\$150		2 50					175
9 00	432 00		432 00							3 00					50
9 00	342 00		342 00					100		2 00					375
4 50	207 00		207 00					*							
10 50	451 50		451 50					25		3 50					50
6 00	192 00		192 00							3 50					500
9 00	432 00		432 00					75		4 00	\$1000				350
6 90	179 40		179 40	179					†						500
12 00	468 00		468 00							3 50				44	100
12 00	264 00		264 00	389	800	450								22	1000
8 10	405 00		405 00				255							80	1500
9 00	387 00		387 00				287	1000							2000
7 50	332 50	10	332 50	392			392				500				200
9 00	234 00		234 00	234					6 00			1	\$5 00	13	\$14
10 00	520 00		520 00	495	800		25		free			1	2 00	10	1900
9 00	414 00		414 00						6 00					10	200
9 00	450 00	72	522 00	414	1000	600	150				1000	2	8 00	11	1500
12 00	624 00	300	924 00	424				500	6 00						1000
8 40	436 80		436 80	436					5 00						200
12 00	624 00	48	672 00	472	1000	600	200					1	4 00		1000
12 00	612 00		612 00				612	550							800
9 00	441 00	40	481 00	481					6 00						200
9 00	288 00		288 00				348		4 50						200
9 00	468 00		468 00	468					5 00		1000				400
10 50	546 00		546 00	395	1000	450	151				1000				1500
10 50	483 00		483 00				483		8 00						300
7 50	292 50		292 50	292			292		3 50						800
7 00	301 00		301 00	291	475	250	10				500			15	600
6 00	192 00		192 00	237	800	300								20	900
9 00	351 00	200	551 00	351				200	7 00						400
12 00	468 00	168	636 00	561	1000	600	75				50	1	1 00		600
11 40	296 40		296 40	421					7 00		40	1	2 00		400
11 40	524 40		524 40	374	250			150						35	600
7 50	292 50	25	292 50	279	700	150	8		*		25	1	3 00	37	750
7 50	375 00		375 00	295	600	300	80							9	500

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 13.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Molder	56	U. S.	Ireland	m	5	4	1		5	39	13	laid off
"	24	"	U. S.	m	1	1			2	46	6	"
"	30	"	"	m	1	1			2	46	6	sick and laid off
"	32	England	Scotland	m	1	1	1		3	39	13	laid off
Blacksmith	31	U. S.	U. S.	m				1	2	48	9	"
"	36	"	"	m	4	4	3		5	43	9	out of work
A. P. FERGUSON, ANN ARBOR.												
Painter	16	U. S.	Germany	s						51	1	no work
"	19	"	Ireland	s						52		"
"	23	"	Germany	s						48	4	no work
Carriage trimmer	19	"	U. S.	s						46	6	sick and no work
"	47	Canada	England	m					1	52		"
Laborer	15	U. S.	Germany	s						52		"
Blacksmith helper	16	"	"	s						26	26	no work
Blacksmith	39	Germany	"	m	6	4	4		5	26	26	sickness
"	23	Canada	Canada	s						50	2	sick
Blacksmith helper	18	U. S.	U. S.	s						32	20	no work
Finisher	20	Canada	Canada	s						52		"
Wood worker	45	U. S.	U. S.	m	4	3	2		4	26	26	sick
"	21	"	"	s						32	20	no work
Painter	32	"	Ireland	m	3	3	2		4	52		"
Blacksmith foreman	32	"	Germany	m	1	1	1	1	3	52		"
Carriage trimmer	46	"	U. S.	m					1	39	13	sick
WALKER & CO., ANN ARBOR.												
Blacksmith helper	17	U. S.	Germany	s						26	26	broken leg
Painter	18	"	U. S.	s						43	4	not answered
Blacksmith	22	"	Germany	s						30	22	no work
Painter	18	"	"	s						50	2	"
Carriage trimmer	18	"	"	s						52		"
"	36	"	U. S.	m					1	52		"
Painter	25	"	Germany	m	1	1			2	52		"
Blacksmith	39	Germany	"	m	5	5	4		6	52		"
"	32	U. S.	"	m	4	4	3		5	52		"
Wood worker	40	Canada	"	m	4	4	1		5	52		"
"	25	Germany	"	m	1	1			2	26	26	no work
HUNTER & TURNBULL, ANN ARBOR.												
Laborer	43	U. S.	U. S.	m	3	3	3		4	52		"
Wood worker	52	Germany	Germany	m	10	6	3		7	52		"
Molder	24	U. S.	U. S.	m	1	1	1		2	52		"
Machinist	21	"	Germany	s				1	1	50	2	no work
"	28	England	England	m						1	20	first work in U. S.
Laborer	19	Germany	Germany	s						52		"
Machine hand	19	U. S.	"	s						52		"
F. WAGNER & CO., ANN ARBOR.												
Carriage trimmer	22	U. S.	U. S.	m					1	32	20	no work
Painter	20	"	Germany	s						52		"
Wood worker	43	Germany	"	m	8	5	3		6	52		"
Blacksmith	21	Canada	"	s						52		"
Painter	14	U. S.	"	s						26		first work
Blacksmith helper	17	"	"	s						52		"

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
510 50	\$109 50	-----	\$409 50	\$388	\$1200	\$300	\$21	-----	-----	-----	-----	-----	-----	-----	-----	\$1000
10 50	483 00	-----	483 00	483	-----	-----	-----	-----	\$4 50	-----	-----	-----	-----	-----	-----	250
12 50	575 00	-----	575 00	575	-----	-----	-----	-----	8 00	-----	\$1000	1	25 00	-----	-----	700
10 80	421 20	-----	421 20	244	1000	700	102	\$75	-----	-----	1000	-----	-----	12	-----	1100
7 50	322 50	-----	322 50	322	1500	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2000
12 00	516 00	-----	516 00	516	-----	-----	-----	-----	2 00	-----	-----	-----	-----	-----	-----	200
3 00	153 00	-----	153 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
5 00	260 00	-----	260 00	-----	-----	-----	-----	-----	-----	-----	-----	1	5 00	-----	-----	50
9 00	482 00	-----	482 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	75
3 00	138 00	-----	138 00	-----	-----	-----	-----	-----	-----	\$3 50	-----	-----	-----	-----	-----	50
14 00	728 00	\$150	878 00	500	2000	-----	-----	850	-----	-----	2000	-----	-----	26	\$100	2800
6 00	312 00	-----	312 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4 00	104 00	-----	104 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
10 50	273 00	400	673 00	675	-----	-----	-----	-----	5 00	-----	-----	-----	-----	19	-----	450
12 00	600 00	-----	600 00	-----	-----	-----	-----	-----	-----	3 25	-----	-----	-----	3 1/2	-----	100
3 65	116 80	-----	116 80	-----	-----	-----	-----	-----	-----	2 50	-----	-----	-----	-----	-----	-----
6 00	312 00	-----	312 00	-----	-----	-----	-----	-----	-----	3 25	-----	-----	-----	2	50	150
12 00	312 00	150	462 00	462	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	-----
9 00	288 00	-----	288 00	-----	-----	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	200
12 00	624 00	-----	624 00	400	1500	-----	-----	200	-----	-----	2000	1	5 00	-----	-----	2500
15 00	780 00	-----	780 00	450	-----	-----	-----	800	9 00	-----	2000	-----	-----	-----	-----	1000
12 00	468 00	-----	468 00	175	1800	1800	200	-----	-----	-----	3000	1	2 00	-----	-----	1000
4 00	104 00	-----	104 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
5 00	240 00	-----	240 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
7 00	210 00	96	306 00	-----	-----	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	100
4 00	200 00	-----	200 00	-----	-----	-----	-----	10	2 00	-----	-----	-----	-----	-----	-----	-----
4 00	208 00	-----	208 00	-----	-----	-----	-----	-----	-----	3 00	-----	-----	-----	-----	-----	-----
18 00	936 00	-----	936 00	936	-----	-----	-----	-----	8 33	-----	-----	-----	-----	-----	-----	500
13 50	702 00	1121	1823 00	675	1800	-----	-----	150	-----	-----	-----	-----	-----	-----	-----	2000
10 00	520 00	-----	520 00	500	-----	-----	-----	-----	5 50	-----	-----	-----	-----	18	-----	250
12 00	624 00	-----	624 00	500	1500	400	100	-----	-----	-----	2000	-----	-----	-----	-----	1500
10 50	546 00	-----	546 00	546	-----	-----	-----	-----	8 50	-----	1000	-----	-----	24	-----	500
6 00	156 00	-----	156 00	300	-----	-----	-----	-----	4 00	-----	-----	-----	-----	6	40	200
7 50	390 00	75	465 00	465	-----	-----	-----	-----	6 00	-----	-----	-----	-----	-----	-----	300
12 00	624 00	310	934 00	834	2000	-----	-----	100	-----	-----	2000	-----	-----	35	-----	3000
12 00	624 00	-----	624 00	624	-----	-----	-----	-----	4 50	-----	-----	1	10 00	-----	-----	200
6 00	300 00	-----	300 00	-----	-----	-----	-----	-----	-----	5 00	-----	-----	-----	-----	-----	50
14 00	280 00	-----	280 00	280	-----	-----	-----	-----	4 50	-----	-----	1	4 00	5 mo	20	350
3 00	156 00	-----	156 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	18	-----	30
6 00	312 00	-----	312 00	-----	-----	-----	-----	-----	2 50	-----	-----	-----	-----	-----	-----	100
15 00	480 00	-----	480 00	375	-----	-----	-----	100	7 25	-----	-----	-----	-----	-----	-----	400
7 50	390 00	-----	390 00	-----	-----	-----	-----	-----	2 50	-----	-----	-----	-----	-----	-----	60
10 00	520 00	200	720 00	600	900	200	50	-----	-----	-----	-----	-----	-----	23	-----	900
9 00	488 00	50	518 00	-----	-----	-----	-----	50	-----	3 00	-----	-----	-----	-----	17	125
3 00	78 00	-----	78 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
5 00	280 00	-----	280 00	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

* Lives at home and gives wages to parents.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
MARKEHAM AIR RIFLE CO., PLYMOUTH.												
Engineer.....	27	Canada	U. S.	s	—	—	—	—	—	46	4	vacation
Laborer.....	28	U. S.	Ireland	s	—	—	—	—	—	51	1	sick
Wood worker.....	56	"	U. S.	m	3	3	1	—	4	52	—	—
Wire grinder.....	38	"	"	s	—	—	—	—	—	46	3	laid off
Wood worker.....	38	"	Scotland	m	2	2	2	—	3	47	5	"
".....	17	"	U. S.	s	—	—	—	—	—	50	2	"
Wire bender.....	18	"	"	s	—	—	—	—	—	26	26	out of work
Wood worker.....	42	"	"	m	1	1	1	1	3	46	6	laid off
Thread cutter.....	22	"	Germany	s	—	—	—	—	—	52	—	—
Wood worker.....	29	"	U. S.	m	4	4	—	—	5	52	—	—
Wire grinder.....	20	"	"	s	—	—	—	—	—	49	3	sick
Wood worker.....	51	"	"	m	1	1	—	—	2	52	—	—
Putting on hinges.....	50	"	"	m	3	3	2	—	4	49	3	laid off and vacation
Putting up guns.....	35	"	Ireland	m	—	—	—	—	—	52	—	—
Wiring barrels.....	26	"	U. S.	m	1	1	—	—	2	43	9	out of work
Polisher.....	18	Scotland	Scotland	s	—	—	—	—	—	49	3	"
".....	19	U. S.	U. S.	s	—	—	—	—	—	50	2	vacation
".....	19	"	"	s	—	—	—	—	—	39	13	out of work
Tube fitter.....	28	"	"	m	1	1	—	—	2	31	21	sick and no work
Machine hand.....	27	"	"	s	—	—	—	—	—	46	6	out of work
".....	32	"	"	m	—	—	—	—	1	42	9	sick and laid off
Polisher.....	44	"	Scotland	m	4	4	3	—	5	50	2	sick
".....	29	"	U. S.	m	2	2	—	—	3	46	6	sickness and no work
Wood worker.....	31	"	"	s	—	—	—	1	1	50	2	sick and laid off
Driller.....	23	"	Ireland	m	—	—	—	—	1	43	4	laid off
Machine hand.....	18	"	U. S.	s	—	—	—	—	—	50	2	sick and vacation
Brass turner.....	19	"	"	s	—	—	—	—	—	50	2	sick and laid off
Machinist.....	28	"	"	m	1	1	—	1	3	49	3	sick
Fitting plungers.....	20	"	"	s	—	—	—	—	—	52	—	—
Wood worker.....	21	"	Germany	s	—	—	—	—	—	52	—	—
Putting up guns.....	31	"	"	wr	—	—	—	—	—	39	13	sickness
".....	32	"	U. S.	m	1	1	—	—	2	43	4	"
".....	40	"	"	m	2	2	2	—	3	49	3	sickness and vacat'n
Sorting barrels.....	29	France	France	m	1	1	—	—	2	49	3	accident
Painter.....	33	U. S.	U. S.	m	1	1	—	—	2	49	3	sick and vacation
".....	26	"	"	m	1	1	—	—	2	46	6	sick and laid off
".....	43	Scotland	Scotland	wr	1	1	—	1	2	39	13	sickness
".....	29	U. S.	England	s	—	—	—	—	—	35	17	sick
".....	37	"	U. S.	m	2	2	1	—	3	43	9	sick and no work
Laborer.....	34	"	"	m	2	2	1	—	3	51	1	vacation
Packer.....	29	"	"	m	3	3	1	—	4	52	—	—
Wood worker.....	55	Ireland	Ireland	m	2	2	2	—	3	52	—	—
".....	29	U. S.	England	s	—	—	—	—	—	51	1	vacation
".....	26	Canada	Canada	s	—	—	—	—	—	40	12	out of work
".....	21	U. S.	U. S.	s	—	—	—	—	—	51	1	vacation
Laborer.....	44	"	"	wr	—	—	—	—	—	18	34	sick
Wire cutter.....	24	"	"	m	1	1	—	—	2	50	2	sick and vacation
Wood worker.....	70	"	"	m	—	—	—	—	1	17	35	out of work & vacat'n
Brass turner.....	23	"	"	s	—	—	—	—	—	50	2	sick and laid off
Wood worker.....	33	"	"	m	—	—	—	—	1	44	8	sick and no work
Metal polisher.....	22	"	"	s	—	—	—	—	—	39	13	sick
Carpenter.....	58	"	"	m	1	1	1	—	2	43	4	out of work

TABLE No. 13.—CONTINUED.—Showing Individual Reports.

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$12 00	\$576 00		\$576 00					\$300		\$3 50	\$1000			18		\$500
6 00	306 00		306 00					120		3 25		1	\$5 00			600
15 00	780 00		780 00	\$480	\$2500			300								3000
6 00	294 00		294 00					20		3 50						
6 00	282 00		282 00	267	100		\$15									250
3 00	150 00		150 00					60		free						125
6 90	179 40		179 40							2 00						150
6 60	303 60		303 60	303					\$3 00							200
7 00	354 00		354 00					75		1 50		1	5 00			300
9 00	468 00		468 00	468					4 00							200
4 50	220 50		220 50					50		3 50						300
12 00	624 00		624 00	524	800		50	50								1800
6 60	323 40	\$432	755 40	505				250	5 00		2000					3000
7 50	380 00		380 00	295	2000			125			2000					3000
6 00	258 00		258 00	258					5 00							300
4 50	220 50		220 50					20		3 00						
12 00	600 00		600 00					50		†						100
5 00	195 00		195 00					*								50
6 00	186 00	100	286 00	286					5 00							250
7 38	339 48		339 48					100		3 50		1	5 00			200
7 00	301 00		301 00	301					5 00							200
7 00	350 00	96	446 00	296	800	\$500	150									1000
7 00	322 00		322 00	322					4 00							200
7 00	350 00		350 00	250				100	†			1	5 00			200
6 75	324 00		324 00	274				50	3 00							150
6 25	312 50		312 50					25		†						250
8 00	400 00		400 00					150		†						200
7 50	367 50		367 50	367					8 00							50
6 00	312 00		312 00							3 00						150
4 50	234 00	10	244 00					50								
8 00	312 00		312 00							†		1	2 00			200
7 50	360 00		360 00	360					5 50							500
8 00	392 00	100	492 00	392				100	free							300
12 00	588 00		588 00						5 00			1	4 00	5		600
9 00	441 00		441 00	391	900	325	50					1	5 00			500
8 75	402 50		402 50	402					6 00			1	5 00			2500
12 00	468 00		468 00	588					2 50			1	5 00			600
12 00	420 00		420 00							3 50						
9 00	387 00		387 00	355	600	75	82									
6 00	306 00		306 00	306					6 00							
8 00	416 00		416 00	416					8 00			1	3 00			600
10 50	546 00		546 00	546					4 00					36		800
7 50	382 50		382 50							3 50						50
6 00	240 00		240 00					25		3 25				5	\$800	150
9 00	459 00		459 00							free						2500
6 50	117 00		117 00							3 00						
7 00	350 00	50	400 00	250				150	6 00							2000
6 00	102 00	100	202 00	202	900											2500
8 00	400 00		400 00					150		3 00						250
12 00	528 00		528 00	438	400	250	50	40				1	4 00			500
7 50	292 50		292 50							3 50						50
10 50	504 00	14	518 00	518	1000						1000					1200

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
CHARLES BREMS, PLYMOUTH.												
Engineer	34	U. S.	U. S.	m	3	1			2	52		
Blacksmith	40	"	"	m	1	1	1		2	52		
	40	"	"	m	2	2		1	3	46	6	laid off
Wood worker	48	"	U. S.	m	4	3		2	4	39	13	accident and laid off
Laborer	23	"	"	m	1	1			2	52		
L. H. BENNETT, PLYMOUTH.												
Teamster	23	U. S.	Germany	m					1	46	6	out of work
Laborer	21	"	U. S.	s						39	13	"
Wood worker	24	"	"	s						50	2	laid off
	19	"	"	s						26	26	out of work
Engineer	25	"	Germany	s						52		
Wood worker	21	"	U. S.	s						52		
PLYMOUTH IRON WIND MILL CO., PLYMOUTH.												
Tinner	26	U. S.	England	s				1	1	48	4	out of work
Grinder	19	"	U. S.	s				1	1	48	9	laid off
Laborer	18	"	"	s						49	3	sick and laid off
Putting up guns	51	"	"	m	2	1	1	1	3	44	8	out of work
	40	"	England	m	3	3	2		4	43	9	laid off & out of work
Sighting guns	20	"	U. S.	m					1	43	9	laid off
Metal polisher	32	"	Germany	m	2	3			4	46	6	"
Engineer	39	"	U. S.	m					1	50	2	vacation
Riveter	54	"	"	wr						39	13	sick and laid off
Metal polisher	50	"	"	wr						46	6	laid off
Electro plater	36	"	"	m	2	2	1		2	52		
PLYMOUTH AIR RIFLE CO., PLYMOUTH.												
Machinist	37	Canada	England	m	1	1	1		2	50	2	sick
Nickle plater	20	"	Ireland	m	1	1			2	46	6	laid off
Driller	27	U. S.	U. S.	m					1	53		
Wood worker	23	"	"	m	1	1			2	26	26	sick and out of work
Metal polisher	29	"	"	m					1	43	9	laid off
Engineer	40	"	"	m	5	5	3		6	50	2	holidays & vacation
Molder	23	"	"	m	1	1			2	45	7	laid off
Driller	20	"	"	s				4	4	39	13	"
Solderer	21	"	"	s						48	4	vacation
	23	"	"	s						43	9	out of work
Putting up guns	18	"	"	s						21	31	"
Finisher	22	"	"	s						50	2	holidays & vacation
	19	"	"	s						32	20	at school and laid off
Brass turner	35	"	"	s						46	6	laid off
ADRIAN BRICK & TILE MACHINERY CO., ADRIAN.												
Wood worker	54	U. S.	"	m	2	2	2		3	48	4	"
	58	"	"	m	1	1		1	3	51	1	holidays
	61	"	"	m	1				1	48	4	sick
Machinist	32	"	"	m	2	2	1		3	51	1	holidays
	27	"	"	m	2	2		1	4	52		
	44	"	"	m	3	2	2		4	52		
Laborer	47	"	"	m	1	1			2	52		

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 50	\$360 00	\$48	\$438 00	\$438					\$2 00							\$50
12 00	624 00		624 00	424				\$200	5 00							300
6 00	276 00	300	576 00	576					6 00							200
9 00	351 00		351 00	451	\$500											600
8 76	455 52		455 52	405				50	3 50							500
9 00	414 00		414 00	369				45	free							125
7 50	292 50		292 50					150		\$3 00						150
7 50	375 00		375 00					100		3 00						150
4 50	117 00		117 00							free						
7 00	364 00		364 00					50		3 00						500
7 50	390 00	50	440 00					200		3 00						300
9 00	432 00		432 00					150		2 50						300
6 00	258 00		258 00	208				50		†						75
7 50	367 50		367 50					15		3 00						100
13 50	594 00		594 00	594	1400											2500
7 50	322 50		322 50	252	400			70								400
7 00	301 00		301 00	261				40	6 00							300
12 00	552 00		552 00						7 50							500
12 00	600 00		600 00	425	1000		\$25	150								1500
7 50	292 50	48	340 50					100		2 00						600
12 00	552 00		552 00							3 50						500
15 00	780 00		780 00	500				280	6 50		1	\$5 00				1000
12 00	600 00		600 00	394	2500	\$800	56	150			1	4 00		30		3500
13 50	621 00	32	653 00	513				140	5 00					2	\$700	900
7 50	390 00		390 00	390					8 00		1	5 00				600
9 00	234 00		234 00	234					5 00							500
12 00	516 00		516 00	416				100	6 50							500
7 50	375 00		375 00	375					3 00							100
13 50	607 50		607 50							6 50						350
6 60	257 40		257 40	257					†							30
10 00	480 00		480 00					150		3 50						250
12 00	516 00		516 00					150		†						150
4 75	99 75		99 75							3 50						
9 60	480 00		480 00							3 50						500
5 40	172 80		172 80							3 50						60
10 00	460 00		460 00							4 00						300
10 50	504 00		504 00	504	600											800
9 80	499 80		499 80	499	1500											3000
15 00	720 00	221	941 00	641	1800	400	300									5000
10 50	535 50	50	585 50	485				100	4 50							800
9 00	468 00		468 00	418	500	150	50									500
10 80	561 60		561 60	561	800											1000
6 75	351 00	96	447 00	426	1200	300	21									1500

† Lives at home and pays no stated amount for board.

† Lives at home and supports family.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Machinist	37	England	England	m	5	3	4		3	51	1	sick
"	30	U. S.	U. S.	m	5	3			3	46	4	"
Molder	35	"	"	m	3	3	1		4	52		"
"	22	"	England	m				1	1	49	3	out of work
"	25	"	Germany	m					1	52		"
Laborer	49	Germany	"	m	5	4	3		5	47	5	sick and no work
Molder	49	U. S.	U. S.	m	1	1			2	52		"
Blacksmith	25	Germany	Germany	m	1	1			2	52		"
"	36	"	"	m	5	5	2		3	52		"
"	34	"	"	m					1	52		"
Machinist	22	U. S.	"	s				3	3	52		"
Molder	29	"	Canada	s						51	1	vacation
Machinist	25	"	England	s						25	17	out of work
"	25	Germany	Germany	s						50	2	holidays and laid off
"	20	U. S.	"	s						50	2	sick
PAGE WOVEN WIRE FENCE CO., ADRIAN.												
Machinist	35	U. S.	U. S.	m	2	2	1		3	52		"
Laborer	32	"	Germany	m	2	2			3	43	9	laid off
Blacksmith	34	"	U. S.	m	1			1	2	51	1	"
Wire weaver	34	"	"	m	1	1			2	26	26	vacation
"	30	"	England	m	1	1			2	35	17	sickness
Wood worker	67	"	U. S.	m	1	1			2	49	3	out of work
"	61	"	"	m	2	2	2		3	52		"
Machinist	24	"	"	m	2				1	52		"
Wire weaver	29	"	"	m					1	39	13	laid off
"	33	"	Ireland	m	3	3	3		4	43	9	"
Wood worker	60	"	U. S.	m					1	43	9	sick and no work
Wire weaver	40	"	"	m				1	2	35	17	laid off
"	47	"	"	m	1				1	44	8	out of work
Wood worker	38	"	"	m	2	2	2		3	26	26	accident
Bobbin maker	48	"	Scotland	m	4	2	1		3	41	11	sick
Machinist	25	"	U. S.	m					1	43	4	accident & vacation
Laborer	41	"	"	wr	3	3	2		3	35	17	sick and laid off
"	43	England	England	m	2	2			3	35	17	out of work
"	27	Ireland	Ireland	m	3	3			4	39	12	laid off
Spooler	43	Germany	Germany	m	5	5	3		6	46	6	"
Blacksmith	24	"	"	s						35	17	sick and laid off
Painter	30	U. S.	U. S.	m	1	1			2	43	9	sick and no work
Machinist	18	"	"	s						46	6	laid off
Wire winder	17	"	"	s						25	17	vacation
Laborer	20	"	"	s						30	12	out of work
Wire weaver	23	"	Germany	s						43	9	sick and no work
"	21	"	U. S.	s						35	17	"
"	24	"	Canada	s						30	13	out of work
"	21	"	U. S.	s						31	21	sick and accident
"	19	"	Germany	s						43	9	laid off
Wood worker	19	"	U. S.	s						30	12	out of work
Wire weaver	28	"	"	s						47	5	laid off
"	19	"	"	s						44	8	"
Laborer	22	"	"	s						50	2	"

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 50	\$535 50	.....	\$585 50	\$505	\$900	\$62 500	\$180	.....	.....	.....	\$350	1	\$4 00	10	.....	\$1000
10 50	504 00	.....	504 00	404	1200	.....	.....	\$100	.....	.....	.....	.....	.....	.....	.....	1500
13 40	686 80	\$190	826 80	826	2000	.....	.....	.....	.....	.....	450	2	8 20	.....	.....	5000
15 00	735 00	.....	735 00	710	800	350	5	.....	.....	.....	.....	.....	.....	.....	.....	500
11 00	572 00	.....	572 00	822	1400	.....	.....	250	.....	.....	1000	1	4 00	.....	.....	1700
7 00	329 00	252	581 00	581	.....	.....	.....	.....	\$5 00	.....	.....	.....	.....	40	.....	900
12 00	624 00	.....	624 00	524	1000	500	100	.....	.....	.....	.....	.....	.....	.....	.....	1000
7 50	390 00	.....	390 00	340	.....	.....	.....	50	4 00	.....	.....	.....	.....	8	.....	400
12 00	624 00	.....	624 00	624	.....	.....	.....	.....	4 00	.....	625	1	4 00	.....	.....	200
12 00	624 00	.....	624 00	499	800	.....	50	75	.....	.....	625	1	4 00	9	\$200	1300
10 50	546 00	.....	546 00	546	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250
6 00	306 00	80	386 00	.....	.....	.....	.....	100	.....	\$2 00	430	2	8 20	.....	.....	200
12 00	420 00	.....	420 00	.....	.....	.....	.....	100	.....	3 50	.....	.....	.....	.....	.....	200
5 00	250 00	100	350 00	.....	.....	.....	.....	52	.....	2 00	.....	1	4 00	21	.....	150
4 00	200 00	100	300 00	.....	.....	.....	.....	43	.....	2 00	.....	.....	.....	.....	.....	500
12 00	624 00	.....	624 00	450	1000	200	124	50	.....	.....	2000	.....	.....	.....	.....	1200
7 50	322 50	.....	322 50	322	.....	.....	.....	.....	5 00	.....	.....	.....	.....	.....	.....	400
10 50	535 50	.....	535 50	435	500	800	.....	100	.....	.....	2800	1	4 00	.....	.....	400
7 50	195 00	100	295 00	295	1200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2500
7 50	262 50	.....	262 50	262	.....	.....	.....	.....	5 00	.....	.....	.....	.....	.....	.....	400
12 00	558 00	.....	558 00	558	.....	.....	.....	.....	6 00	.....	.....	.....	.....	.....	.....	1000
7 50	390 00	.....	390 00	390	.....	.....	.....	.....	6 00	.....	.....	.....	.....	.....	.....	.....
10 00	520 00	.....	520 00	420	.....	.....	.....	100	4 00	.....	.....	.....	.....	.....	.....	200
7 50	292 50	.....	292 50	292	.....	.....	.....	.....	3 00	.....	.....	.....	.....	.....	.....	.....
9 00	387 00	.....	387 00	351	.....	.....	.....	.....	4 00	.....	.....	.....	.....	.....	.....	150
8 00	344 00	.....	344 00	344	1200	.....	.....	.....	.....	.....	.....	1	4 20	.....	.....	2500
10 00	350 00	.....	350 00	350	.....	.....	.....	.....	4 00	.....	.....	.....	.....	.....	.....	.....
8 00	352 00	.....	352 00	292	300	200	60	.....	.....	.....	.....	.....	.....	.....	.....	150
21 60	561 60	.....	561 60	761	600	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	800
6 50	266 50	.....	266 50	266	.....	.....	.....	.....	5 00	.....	.....	.....	.....	.....	.....	500
10 50	504 00	15	519 00	319	.....	.....	.....	200	7 00	.....	2000	.....	.....	.....	.....	1500
7 85	274 75	.....	274 75	274	700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	900
9 00	315 00	.....	315 00	306	700	125	9	.....	.....	.....	375	1	4 20	21	.....	900
7 50	292 50	.....	292 50	292	.....	.....	.....	.....	6 00	.....	.....	.....	.....	12	.....	150
7 00	322 00	.....	322 00	322	.....	.....	.....	.....	4 00	.....	.....	.....	.....	36	.....	.....
8 00	280 00	.....	280 00	.....	.....	.....	.....	125	.....	3 00	.....	.....	.....	15	.....	300
12 00	516 00	.....	516 00	.....	.....	.....	.....	120	.....	7 25	.....	.....	.....	.....	.....	1200
6 75	310 50	.....	310 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	210 00	.....	210 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6 00	234 00	.....	234 00	.....	.....	.....	.....	40	.....	2 50	.....	.....	.....	.....	.....	100
7 50	322 50	.....	322 50	.....	.....	.....	.....	.....	.....	2 50	.....	.....	.....	.....	.....	50
8 00	280 00	.....	280 00	.....	.....	.....	.....	100	.....	3 50	.....	.....	.....	.....	.....	200
10 25	399 75	.....	399 75	.....	.....	.....	.....	.....	3 00	2000	.....	.....	.....	.....	.....	100
8 40	260 40	.....	260 40	.....	.....	.....	.....	75	.....	3 50	.....	.....	.....	.....	.....	150
3 50	150 50	.....	150 50	.....	.....	.....	.....	.....	3 00	.....	.....	.....	.....	.....	.....	50
7 50	292 50	.....	292 50	.....	.....	.....	.....	.....	3 50	.....	.....	.....	.....	.....	.....	100
7 00	329 00	.....	329 00	.....	.....	.....	.....	.....	.....	.....	1000	.....	.....	.....	.....	.....
6 00	264 00	.....	264 00	.....	.....	.....	.....	50	.....	3 00	.....	.....	.....	.....	.....	100
7 50	375 00	.....	375 00	.....	.....	.....	.....	100	.....	3 50	.....	.....	.....	.....	.....	300

* Lives at home and gives wages to parents.
Lives at home and supports family.

† Lives at home and pays no stated amount for board.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
KELLS & SONS, ADRIAN.												
Laborer	55	Ireland	Ireland	m	7	7	2		8	26	26	accident & out of work
Machinist	46	Germany	Germany	m	7	7	3		8	50	2	shop closed
Molder	48	"	"	m	4	3	2		4	50	2	sick
Engineer	43	U. S.	U. S.	m	2	2	2	1	4	37	15	out of work
Machinist	50	"	"	m	2	1	1		2	51	1	holidays
"	51	"	"	m	1	1			2	50	2	accident
"	29	"	"	m					1	49	8	vacation
Wood worker	61	"	"	w	2	2			2	51	1	holidays
Machinist	28	"	"	s						44	8	accident
CHARLES W. ROSE, ADRIAN.												
Painter	45	Germany	Germany	m	8	7	2		8	43	9	out of work
Wood worker	39	U. S.	U. S.	m	1	1	1		2	51	1	sick
"	25	"	Germany	m	1	1			2	39	13	vacation
Engineer	54	"	U. S.	m	1				1	39	13	laid off and sick
Wood worker	22	"	"	s						39	13	laid off
Laborer	16	"	Germany	s						39	13	sick and laid off
Wood worker	21	"	Holland	s						49	3	sick
Laborer	17	"	Germany	s						43	9	laid off
"	17	"	"	s						53		
Wood worker	20	"	U. S.	s						46	6	laid off
McCLELLAN FILE CO., SAGENAW.												
Laborer	22	U. S.	"	m					1	52		
Machine hand	53	"	Scotland	m	1	1			2	51	1	vacation
Laborer	37	Germany	Germany	m	4	4	3		5	52		
"	24	U. S.	Canada	m	1				1	52		
Machine hand	35	Germany	Germany	m	4	4	2		5	52		
"	30	U. S.	U. S.	m	2	2			3	50	2	sick
"	33	"	Canada	m	3	3	2		4	49	3	"
Laborer	28	Canada	"	m	2				1	52		
"	38	U. S.	U. S.	m	2	2	2		3	50	2	sick
Grinder	28	Germany	Germany	m	2	2			3	52		
Laborer	25	Canada	Canada	m	1	1			2	49	3	sick
Machine hand	29	Germany	Germany	m	2	2	1		3	52		
Laborer	32	"	"	m	2	2			3	52		
Machine hand	29	Canada	Ireland	m	2	2			3	52		
"	27	U. S.	Scotland	m	1	1			2	52		
"	40	"	U. S.	m	4	4	3		5	47	5	sickness
Foreman	37	"	"	m	2	2			3	52		
Laborer	21	"	"	s						47	5	sick
"	16	"	"	s						50	2	"
Machine hand	25	"	"	s						50	2	"
Laborer	22	"	"	s						49	3	"
"	15	Canada	Canada	s						48	4	vacation
Machine hand	22	"	England	s						48	4	sick
"	21	U. S.	U. S.	s						47	5	sick and vacation
Laborer	16	"	Germany	s						52		
"	20	"	U. S.	s						49	3	sick
"	23	"	Scotland	s						52		
Machine hand	24	"	U. S.	s						52		

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$234 00	\$200	\$434 00	\$484	\$700											\$1500
13 00	650 00		650 00	570	550	\$100		\$80			\$80	1	\$4 00	28 45		600
10 50	535 00		535 00	525	500											680
9 00	533 00		533 00	538				10	\$5 00							200
9 00	459 00		459 00	459	1000											1200
10 00	500 00		500 00	850	1500			150								3000
11 00	539 00		539 00	539	539				5 00			50	1	4 00		200
12 00	612 00		612 00	412	1200			200								1600
12 00	528 00		528 00							\$8 50						750
7 00	301 00	25	326 00	850	2000						600	1	4 00	36		3000
9 00	459 00		459 00	459					5 00							
12 00	468 00		468 00	818				150	6 00							1500
9 00	381 00	250	601 00	701	2500											5000
10 00	390 00		390 00													
4 00	156 00		156 00					*		*						
7 50	387 50		387 50							*						
7 50	215 00		215 00							3 00	100	1	3 00			
4 00	208 00		208 00					*								
4 00	276 00		276 00							3 00						50
11 00	572 00		572 00	570					free							200
13 50	638 50		638 50	600	800	100	\$80				1000					1100
12 00	624 00		624 00	600					3 00		2000					450
10 00	520 00		520 00	500					5 00		1000			19		250
15 00	780 00		780 00	700	1000	200	50				2000			9	\$80	1500
18 00	900 00		900 00	750	1200	300	60									1800
16 00	784 00		784 00	734				50	10 00		2000					900
9 00	468 00		468 00	460					5 00							350
9 00	450 00		450 00	450					4 50							475
14 00	728 00		728 00	650				50	6 00					14		550
10 00	490 00		490 00	490					5 00							400
15 00	780 00		780 00	680	800	200	50							15		400
9 50	494 00		494 00	475					4 00					18		1300
15 00	780 00		780 00	680					7 00					21		375
18 00	936 00	84	1020 00	725	1800		100				1000			21		400
15 00	705 00	100	805 00	705	1200	100	100				3000					3000
15 00	790 00		790 00	570	1200	250	300				2000					1500
7 50	352 50		352 50					* 75		4 00	8000					1600
6 00	300 00		300 00					*		*						200
15 00	750 00	20	770 00					250		4 00						800
11 00	539 00		539 00					50		4 00						75
5 00	240 00		240 00							2 00				8		150
15 00	720 00		720 00							4 00						75
13 50	634 50		634 50					*		not	ans.					
7 50	390 00		390 00							*						
9 00	441 00		441 00						4 00							
11 00	572 00		572 00					50		4 00						80
13 50	702 00		702 00					150		4 50						800

* Lives at home and gives wages to parents.

Lives at home and pays no stated amount for board.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
MICHIGAN SAW CO., SAGINAW.												
Saw grinder	28	U. S.	Germany	m	1	1			2	52		
Polisher	32	Germany	"	m	3	3	2		4	52		
Engineer	49	U. S.	U. S.	m	1	1	1		2	52		
Saw maker	31	"	Ireland	m	3	3	2		4	51	1	sick
"	19	"	Canada	s						47	5	sick and laid off
"	25	"	"	s						50	2	sick
"	21	"	U. S.	s						44	8	laid off
"	21	"	"	s						50	2	sick
"	21	"	"	s						52		
MORLEY BROS., SAGINAW.												
Engineer	45	Germany	Germany	m	4	3			4	52		
Helper	36	"	"	m	5	5	3		6	52		
Laborer	27	Canada	Canada	m	3	3	1		4	52		
"	30	U. S.	Germany	m					1	52		
Blacksmith	30	Germany	"	m	2	2			3	52		
Foreman	46	"	"	m	3				1	52		
Laborer	32	Ireland	Ireland	s						49	3	sick
Helper	14	U. S.	"	s						52		
"	15	Scotland	Scotland	s						50	2	sick
Laborer	16	U. S.	U. S.	s						52		
LOUIS KRKIS, SAGINAW.												
Machinist	28	"	"	m	2	2			3	52		
"	35	"	Germany	m	4	4	3		5	52		
"	31	"	Canada	m	3	3	1		4	50	2	sick
Helper	19	Canada	Germany	s						49	3	sick and laid off
"	21	"	Canada	s						47	5	
Machinist	17	U. S.	U. S.	s						49	3	sick
"	25	"	"	s						43	4	"
"	16	"	Germany	s						52		
"	30	"	U. S.	s						48	4	sick
KORHLER BROS., SAGINAW.												
Blacksmith	39	U. S.	"	m					1	47	5	sick
"	43	Germany	Germany	m	4	4	3		5	52		
Helper	40	"	"	m	4	4	3		5	52		
Blacksmith	39	"	"	m	4	4	3		5	52		
Machinist	32	"	"	m	3	3	1		4	50	2	sick
Blacksmith	72	"	"	wr	2					44	8	"
Machinist	23	Austria	Austria	s						50	2	"
Book-keeper	19	U. S.	U. S.	s						52		
MONTAGUE IRON WORKS, Montague.												
Foreman	42	U. S.	U. S.	m	3	3	3		4	52		
Engineer	38	"	"	m	4	4	4		5	52		
Machinist	40	Germany	Germany	m	5	5	4		6	50	2	sick
"	41	U. S.	Sweden	m	3	3	2		4	42	10	sickness
"	45	Holland	Holland	m	5	2	2		3	49	3	sick
"	55	Canada	Canada	m	5				1	44	8	sickness
"	48	U. S.	Holland	m	5	2	1		3	47	5	sick

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, am't of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$11 00	\$572 00		\$572 00	\$580	\$700	\$200										\$1000
8 00	416 00		416 00	400	600	200					\$500	1	\$5 00	25		1000
9 00	468 00		468 00	450					\$5 00		2000					500
10 00	510 00		510 00	550	1600	250					2000					1900
7 50	352 50		352 50					\$50		\$4 00						75
12 00	600 00		600 00					200		3 00						800
13 60	550 00		550 00							3 50						40
9 00	450 00		450 00					50		3 50						100
10 00	520 00		520 00					25		3 50						100
10 50	546 00	\$250	796 00	696	1200	200	\$100							30		2000
11 00	572 00		572 00	500	900	400	50							19	\$50	1000
9 00	468 00		468 00	400	850	800	50				3000			4	150	450
9 00	468 00		468 00	480					5 00							450
12 00	624 00		624 00	600					6 00					13		600
15 00	780 00		780 00	700	2500									31		\$200
7 50	367 50		367 50							3 00				12		70
3 00	156 00		156 00					*		*						
3 00	150 00		150 00					*		*					2	
4 00	208 00		208 00					*		*						
12 00	624 00		624 00	600					7 00							600
15 00	780 00		780 00	700	1500			50								2600
15 00	750 00		750 00	700	1600			50								2300
6 00	294 00		294 00							3 50				9		70
9 00	423 00		423 00					100		4 00	1000			12		200
3 00	147 00		147 00					*		*						
12 00	576 00		576 00					200		4 00						500
3 00	156 00		156 00					*		*						
12 00	576 00		576 00					250		4 00						800
10 50	493 50		493 50	500					6 00							500
12 00	624 00	48	672 00	650					5 00					14	100	1200
9 00	468 00	80	548 00	525	800						500			19	100	1200
18 00	936 00		936 00	750	1800		100				3700			18	60	2500
10 50	525 00		525 00	500	600	100								11	50	900
9 00	496 00		496 00							3 50				38	100	1200
7 50	375 00		375 00					25		3 00				7		75
10 00	520 00		520 00					150		3 50						250
13 00	936 00		936 00	700	1200		150	75			2000					2000
15 00	780 00		780 00	700	900		80					1	5 00			1600
15 00	750 00		750 00	600	850	200	100							17	40	1500
13 50	567 00	180	747 00	567	800		100	80								1600
15 00	735 00		735 00	600	700		100							32		1500
13 50	594 00		594 00	590					6 00					19	100	800
15 00	705 00		705 00	600	700		100				2000					1200

* Lives at home and gives wages to parents.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.				Time.		Cause for loss of time.	
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.		No. of weeks lost.
Machinist	39	Germany	Germany	m	4	4	2		5	49		sick
"	27	U. S.	Switz.	m	2	2			3	47	3	sickness
"	32	"	U. S.	m	2	2			3	49	3	sick
"	35	"	"	m	2	2			3	52		sickness
"	23	Holland	Holland	m	2	2				48	4	sickness
"	43	Scotland	Scotland	m	4	4	3		5	49	3	sick
"	45	Germany	Germany	m	6	4	3		5	48	4	sickness
"	50	Holland	Holland	m	5	1	1		2	47	5	sickness
"	40	Sweden	Sweden	m	4	4	3		5	52		sick
"	36	U. S.	Germany	m	3	3	3	1	5	50	2	sick
"	26	"	U. S.	m	1	1			2	52		sick
"	30	Germany	Germany	m	2	2			3	49	3	sick
Helper	32	"	"	m	3	3	1		4	52		sick
"	38	Canada	"	m	3	3	3		4	50	2	sick
Teamster	45	Germany	"	m	2	2	2		3	52		sick
Foreman	42	U. S.	U. S.	m	4	4	3		5	52		sick
Molder	35	Sweden	Sweden	m	3	3	2		4	50	2	sick
Helper	27	Germany	Germany	m	2	2			3	52		sick
Molder	48	Canada	England	m	5	4	2		5	49	3	sick
Helper	55	Germany	Germany	m	6	1			2	48	4	sick
Molder	47	Canada	Canada	m	5	3	2		4	48	4	sick
Cupola tender	40	Holland	Holland	m	4	4	3		5	52		sick
Molder	38	U. S.	"	m	3	3	3		4	49	3	sick
"	35	Holland	"	m	2	2	2		3	52		sick
Helper	49	Sweden	Sweden	m	4	1			1	51	1	holidays
Molder	44	U. S.	U. S.	m	4	2	1		3	50	2	sick
"	25	"	"	m	1	1			2	52		sick
Boiler maker	24	"	Germany	m	1	1			2	48	4	sick
"	26	Holland	Holland	m	1	1			2	52		sick
"	31	U. S.	Canada	m	2	2	1		3	50	2	sick
"	35	"	U. S.	m	2	2	2		3	52		sick
"	41	Holland	Holland	m	3	3	3		4	50	2	sick
Blacksmith	50	Germany	Germany	m	5	1	1		2	47	5	sick
"	30	U. S.	U. S.	m	3	3	2		4	48	4	sickness
"	28	Germany	Germany	m	2	2		1	4	47	5	sick
"	27	Holland	Holland	m	2	2			3	51	1	sick
"	25	Canada	Canada	m	1	1		1	3	52		sick
Pattern maker	36	U. S.	"	m	3	3	3		4	52		sick
"	42	Scotland	Scotland	m	5	5	4		6	49	3	sick
Machinist	50	U. S.	Canada	wr	6	2	1		2	49	3	sick
Laborer	56	Germany	Germany	wr	5				46	6		sick
Machinist	23	U. S.	Holland	s				1	1	50	2	sick
"	22	"	"	s						52		sick
"	19	"	U. S.	s						52		sick
"	18	"	Germany	s						42	10	sick
"	19	Germany	"	s						50	2	sick
"	20	Scotland	Scotland	s						46	6	sick
Molder	18	U. S.	Canada	s						46	6	sick
"	20	Germany	Germany	s						46	6	sick
Rivet boy	17	"	"	s						49	3	sick
Pattern maker	22	U. S.	"	s						52		sick
"	20	"	U. S.	s						48	4	sick
Molder	23	"	Germany	s						52		sick

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.	
Weekly wages.	Annual earnings.	Other sources.	Total Annual income.	Annual family expenses.	If owing home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.				Weekly benefit in case of sickness or accident.
\$15 00	\$735 00		\$735 00	\$675				\$50	\$7 00					24		\$500
15 00	705 00		705 00	650				50	6 00							600
14 00	666 00		686 00	625	\$700		\$80									1200
15 00	780 00		780 00	600	900		175				\$1000					1600
14 50	696 00		696 00	650				45	7 00					8		500
14 00	666 00	\$195	861 00	581				300	8 00					15	\$35	2000
14 75	708 00	180	888 00	700	900	\$100	180							9	40	1600
15 00	705 00		705 00	600				100	7 00					5	30	500
15 00	780 00		780 00	675				80	9 00					7	25	600
15 00	750 00		750 00	650				100	8 00							800
15 00	790 00		780 00	600	800	200	150									1500
15 00	735 00		735 00	780	700									12	30	1200
9 00	468 00		468 00	460					6 00					13		500
9 00	450 00		450 00	468					6 00					11	50	500
7 50	390 00		390 00	390					6 00					10	10	600
16 50	858 00		858 00	650	1200			200			1000					2000
15 00	750 00		750 00	680	1000	200	120				2000			13	50	1600
9 00	468 00		468 00	468	600						1000	1	\$5 00	18		1200
15 00	785 00		735 00	650					8 00					20	100	1200
9 00	432 00	150	582 00	575	800	200								17	120	1600
15 00	720 00		720 00	700					6 00					31		1000
18 50	702 00		702 00	700					8 00					21	25	900
15 00	735 00		735 00	600	800		100									1100
9 00	468 00		468 00	460	800	300								15	60	1200
9 00	459 00		459 00	450	700	300								18	75	1400
15 00	750 00		750 00	675	800	100	75									1800
14 50	754 00		754 00	600	800	200	150									1200
15 00	720 00		720 00	620				100	7 00							500
13 50	702 00		702 00	600	700	100	100							16		900
15 00	750 00		750 00	650				100	7 00							800
15 00	780 00		780 00	650	800		125									1400
16 00	800 00		800 00	700	900		100				2000			18	50	1500
15 00	705 00		705 00	590	800	200	125							28		1400
13 50	648 00		648 00	588				60	7 00							900
15 00	705 00		705 00	650				50	8 00		1000			19		1000
9 00	459 00		459 00	450					6 00					9		500
12 00	624 00		624 00	620					7 00					16	25	450
16 00	928 00	96	1024 00	700	1200		240				8000					3000
15 00	735 00		785 00	700					8 00					22	50	900
15 00	735 00		735 00	690	700		100									1200
7 50	845 00		815 00							\$3 50				35	25	400
13 00	650 00		650 00	480				170	6 00							400
18 00	676 00		676 00					200		\$3 50						500
6 00	312 00		312 00							3 50						
7 50	815 00		315 00							3 50						
7 50	875 00		375 00							8 50						
7 50	345 00		345 00							3 75						
7 50	345 00		345 00					50		3 50				13		
7 50	845 00		345 00					60		3 00				17		80
6 00	294 00		294 00							*				5		
10 50	546 00		546 00					200		4 00						360
9 00	432 00		432 00					180		4 00						200
9 00	468 00		468 00					100		4 00	2000					500

* Lives at home and gives wages to parents.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
HENRY BLOECKER & CO., GRAND HAVEN.												
Foreman	25	U. S.	U. S.	m	3	3	2		4	52		
Helper	43	Germany	Germany	m	1	1	1		2	52		
Machinist	23	U. S.	"	m					1	52		
"	49	Sweden	Sweden	m	1	1			2	52		
Blacksmith	30	Germany	Germany	m	5	5	1		6	52		
Foreman	51	Canada	Canada	m					1	52		
Molder	59	England	England	m	3				1	48	4	sick
"	22	U. S.	Holland	m					1	49	3	"
Cupalo tender	28	Sweden	Sweden	m	2	2			3	52		"
Helper	26	Holland	Holland	m					1	52		
Machinist	44	England	England	m	10	1	1		2	50	2	sick
"	32	U. S.	U. S.	m	1	1	1		2	52		
"	48	"	Germany	m	3	3	3		4	52		
"	35	"	U. S.	m	5	5	3		6	52		
"	35	"	England	m					1	52		
"	30	Germany	Germany	m	4	4	2		5	50	2	sick
Pattern maker	30	U. S.	U. S.	m	1	1			2	52		
Machinist	32	"	"	m					1	49	3	sick
"	31	"	Germany	m	1	1	1		2	52		
"	41	"	U. S.	wr	1	1	1	1	2	49	3	sickness
"	29	"	"	wr						48	4	sick
"	30	"	"	s						52		
"	26	"	England	s						52		
"	17	"	Germany	s						52		
"	19	"	U. S.	s						52		
"	21	"	"	s						52		
Molder	17	"	"	s						36	16	school
Engineer	22	Germany	Germany	s						52		
Machinist	21	U. S.	U. S.	s						52		
Helper	25	Poland	Poland	s						52		
Pattern maker	17	U. S.	U. S.	s						50	2	sick
DAKE ENGINE MFG. CO., GRAND HAVEN.												
Inventor	40	Germany	Germany	m	4	4	3		5	52		
Foreman	43	England	England	m	10	9	3		10	52		
Machinist	30	U. S.	U. S.	m	2	2			3	52		
"	64	Germany	Germany	m				1	2	49	3	sick
"	27	U. S.	England	m	2	2			3	50	2	"
Engineer	24	"	U. S.	m					1	49	3	"
Machinist	36	Germany	Germany	m	2	2	2		3	52		
"	25	"	"	s	1	1			2	50	2	sick
"	18	England	England	s						52		
"	16	U. S.	"	s						50	2	sick
"	14	"	"	s						51	1	sick
"	18	"	U. S.	s						49	3	"
"	18	"	Holland	s						48	4	"
Pattern maker	21	"	Germany	s						47	5	sick and laid off
Machinist	20	"	Canada	s						49	3	sick
"	23	"	Germany	s						47	5	no work

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$16 50	\$358 00	\$30	\$388 00	\$700	\$1200			\$150								\$3000
9 00	488 00		488 00	400	900	\$500	\$40			\$8 00				18		1000
12 00	624 00		624 00	600												200
10 50	546 00		546 00	500	800									28		1000
12 00	624 00		624 00	600	400									6		700
20 00	1040 00	60	1100 00	700	700			400						40		2600
15 00	720 00		720 00	625					6 00					17	\$100	500
15 00	735 00		735 00	700					7 00							250
10 50	546 00		546 00	420	600		120		6 00					8		900
9 00	468 00		468 00	450					6 00					9		300
12 00	600 00		600 00	600					6 00					16	50	400
12 00	624 00		624 00	600					6 00							500
13 50	702 00		702 00	700	800											1200
10 50	546 00		546 00	540	700	200										900
9 00	468 00		468 00	460					7 00							350
12 00	600 00		600 00	600	700									13		1000
12 00	624 00	250	874 00	600				250	8 00							2000
10 50	514 50		514 50	500					7 00							450
12 00	624 00		624 00	600					8 00							350
9 00	441 00		441 00	441					6 00							450
12 00	576 00		576 00					50	\$3 50							300
13 50	702 00	50	752 00					300	3 50							800
15 00	780 00	30	810 00					350	4 00							600
6 00	312 00		312 00					*	*							
4 50	234 00		234 00					*	*							
6 00	312 00		312 00					*	*							
8 00	108 00		108 00					*	*							
9 00	468 00		468 00					200	†					10		350
4 00	208 00		208 00					*	*							
9 00	468 00		468 00					100	3 50					13		275
3 00	152 00		152 00					*	*							
19 20	998 40		998 40	748				250	7 00					89		8000
16 50	858 00	590	1448 00	800				575	7 00					17	60	1800
12 00	624 00		624 00	600					4 00							450
13 50	661 50		661 50	700					9 00					39		500
12 00	600 00		600 00	600	600											1000
10 50	514 50		514 50	500					7 00							450
12 00	624 00		624 00	575	800		40							19		1200
9 00	450 00		450 00	450					6 00					18		250
9 00	468 00		468 00					50		5 00				17		
3 00	150 00		150 00					*	*							
8 00	153 00		153 00					*	*							
7 50	367 50		367 50					*	*							
3 00	144 00		144 00					*	*							
12 00	564 00		564 00					250	2 50							300
5 25	267 25		267 25					*	*							
10 50	498 50		498 50					200	4 00							850

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
S. D. KIMBARK, QUINCY.												
Wood worker	31	U. S.	U. S.	s	-	-	-	1	1	51	1	holidays.
"	33	"	"	s	-	-	-	-	-	48	9	vacation
"	39	"	Ireland	s	-	-	-	-	-	48	9	out of work
Blacksmith	18	"	U. S.	s	-	-	-	-	-	51	1	sick
Iron worker	19	"	"	s	-	-	-	-	-	26	26	out of work
"	16	"	"	s	-	-	-	-	-	52	-	-
Wood worker	18	"	"	s	-	-	-	-	-	26	26	out of work
"	25	"	"	s	-	-	-	-	-	49	3	sick and vacation
Laborer	17	"	"	s	-	-	-	-	-	36	13	out of work
Machine hand	16	"	Ireland	s	-	-	-	-	-	50	2	laid off
Blacksmith	19	"	"	s	-	-	-	-	-	39	13	out of work
Wood worker	34	"	U. S.	m	1	1	-	-	2	52	-	-
"	39	"	"	m	1	1	-	-	2	43	9	out of work
"	27	"	"	m	-	-	-	-	1	51	1	holidays
Engineer	36	"	"	m	1	1	-	-	2	51	1	laid off
Facer	52	"	"	m	-	-	-	-	1	35	17	out of work and sick
Polisher	31	"	"	m	-	-	-	1	2	51	1	holidays
Wood worker	49	Germany	Germany	m	4	3	2	-	4	51	1	"
"	36	U. S.	"	m	4	4	4	-	5	51	1	"
"	29	"	U. S.	m	3	3	-	-	4	46	6	out of work
"	47	"	"	wt	-	-	-	-	-	26	26	sick
"	36	"	"	m	1	1	1	-	2	51	1	holidays
"	56	"	"	m	-	-	-	-	1	52	-	-
"	41	"	"	m	2	2	2	-	3	43	9	laid off
"	30	"	"	m	2	2	-	-	3	50	2	out of work
"	56	England	England	m	-	-	-	-	1	52	-	-
"	50	"	"	m	2	2	1	-	3	26	26	worked for self
"	47	U. S.	U. S.	m	1	1	-	1	3	50	2	laid off
"	25	"	"	m	-	-	-	-	1	52	-	-
"	45	"	"	m	2	1	1	-	2	52	-	-
Blacksmith	33	"	"	m	1	1	-	-	2	26	26	sick and accident
Wood worker	27	"	Germany	m	2	2	-	-	3	50	2	sick and vacation
Blacksmith	45	"	Ireland	m	2	2	2	-	3	47	5	laid off and sick
Laborer	35	"	U. S.	m	1	1	1	-	2	48	4	laid off
"	30	"	"	m	2	2	1	-	3	46	6	laid off and sick
Wood worker	42	"	"	m	3	3	2	-	4	52	-	-
"	50	Nov. Sco.	Nov. Sco.	m	2	2	-	-	3	43	9	laid off and vacation
"	39	U. S.	France	m	-	-	-	-	1	39	13	sick
"	25	"	England	m	1	1	-	-	2	50	2	laid off
"	29	"	Germany	m	-	-	-	-	1	51	1	"
"	38	"	England	m	7	7	2	-	8	39	13	"
"	49	"	U. S.	m	4	4	3	-	5	48	4	"
"	46	"	"	m	3	3	2	-	4	39	13	"
"	37	"	"	m	4	4	3	-	5	39	13	"
"	58	"	"	m	1	1	1	-	2	39	13	"

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am t.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness.			
38 00	\$306 00		\$306 00	\$306					+							\$175
12 00	516 00	\$200	716 00							\$3 50						\$000
12 00	516 00		516 00							4 00						25
4 50	229 50		229 50					\$40		free						
4 50	117 00		117 00							free						50
4 50	234 00		234 00							free						
4 50	117 00		117 00							2 50						
8 00	392 00		392 00							2 00						75
4 50	175 50		175 50							1 50						
4 80	240 00		240 00							2 00						
6 00	234 00		234 00							3 00						50
6 00	312 00		312 00	237	\$250		\$75									600
6 00	258 00		258 00	258					\$5 00							200
8 00	406 00		406 00	308				100	6 00							250
9 00	459 00		459 00	334	1000		75									1500
7 80	262 50		262 50	262					6 00							150
9 00	459 00		459 00	459					5 00							180
12 00	663 00		663 00	663					3 50		\$1000					800
10 30	550 80		550 80	490				70	7 00			1	\$3 00	31		400
7 50	345 00		345 00	345					5 00							50
10 50	273 00		273 00							4 00						180
8 00	406 00	100	506 00	506					6 00							800
6 00	312 00	20	332 00	332	800											2000
9 60	387 00		387 00	387					4 50							280
12 50	675 00		675 00	375	1000			300								2700
10 00	520 00	50	570 00	570					8 00					36	\$50	1200
6 00	156 00	500	656 00	400	600	\$200	412				1000					2200
7 23	396 00		396 00	396					8 00							100
9 00	468 00		468 00	318				150	5 00							1500
10 80	561 60		561 60	561					7 00							150
10 80	280 80		280 80	280					5 00							100
12 00	650 00		650 00	635				15	6 00							1200
16 00	470 00		470 00	470	800				5 00							1000
7 80	360 00		360 00	265				75	5 00							175
7 50	345 00		345 00	320				25	5 00							200
15 00	790 00		790 00	530	1200		150	100			2000					2000
12 00	516 00	48	564 00	564					6 00					42		1000
12 50	526 50		526 50						7 00		2000					300
10 00	500 00		500 00	400				100	6 50							350
12 00	612 00		612 00	612					5 00							700
12 50	526 50		526 50	526					6 50							150
10 80	504 00	60	564 00	564					6 50							500
12 00	498 00		498 00	468					5 00							300
9 00	351 00		351 00	251	400			100								600
9 00	351 00		351 00	351	600											1000

‡ Lives at home and supports family.

TABLE No. 13.—CONTINUED.—Showing Individual Reports.

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
HOWELL MFG. CO., HOWELL.												
Wood worker.	23	U. S.	U. S.	s	—	—	—	—	—	43	9	sick and laid off
Sawyer	31	"	"	s	—	—	—	—	—	35	17	out of work
"	21	"	"	s	—	—	—	—	—	43	4	"
Laborer	20	"	"	s	—	—	—	—	—	26	26	sick and out of work
Teamster	44	"	"	m	1	1	—	—	2	52	—	"
"	31	"	"	m	2	2	—	—	3	31	21	out of work
Wood worker	26	"	"	m	1	1	—	—	2	49	3	vacation
"	28	"	"	m	1	1	—	—	2	47	5	laid off
"	31	"	"	m	2	2	—	—	3	26	26	sick and out of work
"	32	"	"	m	5	5	2	—	6	49	3	laid off and vacation
"	21	"	"	m	—	—	—	—	1	39	13	sick and out of work
Fireman	37	"	"	m	2	2	—	—	3	43	9	out of work
Engineer	32	"	Ireland	m	3	3	3	—	4	50	2	laid off
Wood worker	27	"	U. S.	m	1	1	—	—	2	51	1	"
"	29	"	"	m	—	—	—	—	1	26	26	out of work
Laborer	47	"	"	m	3	3	3	—	4	25	17	sick
"	35	"	England	m	2	2	1	—	3	50	2	out of work
"	30	"	U. S.	m	2	2	—	—	3	48	4	out of work and sick
"	41	"	"	m	1	1	1	—	2	35	17	sick and out of work
"	36	"	"	m	—	—	—	1	2	43	9	out of work
Wood worker	37	"	"	m	3	3	2	—	4	36	16	laid off
"	45	"	"	m	2	2	2	1	4	39	13	laid off and sick
Sawyer	29	"	"	m	1	1	—	—	2	44	8	out of work
Wood worker	38	Austria	Austria	m	1	1	—	—	2	35	17	out of work and sick
W. SMITH, HOWELL.												
Engineer	32	U. S.	Germany	s	—	—	—	—	—	46	6	laid off
Sawyer	34	Canada	"	s	—	—	—	—	—	26	26	out of work
Laborer	37	"	"	m	1	1	1	—	2	26	26	"
Sawyer	37	"	Canada	m	2	2	2	—	3	39	13	accident
Laborer	23	U. S.	U. S.	m	—	—	—	—	1	39	13	laid off
Picker	45	"	"	m	1	1	1	—	2	26	26	out of work
Laborer	30	"	"	m	—	—	—	—	1	50	2	laid off
J. M. CLARK & Co., HOWELL.												
Wood worker	48	Germany	Germany	m	3	3	1	—	4	26	26	out of work
Painter	41	U. S.	U. S.	m	1	1	1	—	2	32	20	laid off
Blacksmith	38	"	"	m	3	3	1	—	4	39	13	"
"	39	"	"	m	1	1	1	—	2	39	13	"
Wood worker	42	"	"	m	7	7	6	—	8	39	13	"
"	24	"	"	m	2	2	2	—	3	39	13	"
Engineer	51	"	"	m	—	—	—	—	1	43	9	"
Machinist	50	"	"	m	5	5	3	—	6	41	11	"
"	27	"	England	m	—	—	—	1	2	43	4	"
Wood worker	45	"	U. S.	m	3	3	3	—	4	50	2	"
Machinist	17	"	"	s	—	—	—	—	—	26	26	out of work & southeast
Wood worker	22	England	England	s	—	—	—	—	—	35	—	first work in U. S.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born. No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning a home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$7 00	\$322 50		\$322 50							\$3 00						
12 00	420 00		420 00							4 00						\$200
7 50	360 00		360 00					\$150		3 00						300
9 00	234 00		234 00							3 50						30
12 00	624 00		624 00	\$624					\$6 00							600
12 00	372 00	\$150	522 00	522					6 25							500
6 90	338 10	48	386 10	386					4 50							900
5 40	253 80		253 80	253					4 00							150
7 50	195 00		195 00	195					4 00							400
6 75	330 75		330 75	330					5 00							50
6 75	263 25		263 25	263					free							300
6 75	290 25		290 25	290					7 00		\$1000					250
9 00	450 00		450 00	450					8 00							150
7 50	382 50	500	882 50	432	\$700	\$50		450								2000
6 00	156 00		156 00	256					6 50							75
7 50	262 50		262 50	262	1500											3000
6 75	337 50		337 50	259	650		\$18	60			2000					750
6 75	324 00		324 00	324					4 00							150
6 75	286 25	50	286 25	286					5 25							300
6 00	258 00	50	308 00	280	700	400	28				1500					500
13 50	486 00		486 00	436	900	300		50			3000					700
6 75	263 25	100	363 25	363					5 00							\$000
7 50	330 00		330 00	330	400	175										500
5 40	189 00	100	289 00	289					4 00			1	\$3 00	12		200
9 00	414 00		414 00							3 50						50
7 50	195 00	200	395 00							2 50						3000
7 50	105 00	200	305 00	395					6 50		1000				18	2000
9 00	351 00		351 00	351					4 25						13	800
6 00	234 00	104	338 00	338					5 25							100
7 50	195 00	48	243 00	243					4 00							
9 00	450 00		450 00	350				100	6 00							500
7 50	195 00	40	235 00	225	600	130	9				2500				24	800
10 50	336 00		336 00	336					6 50							
7 50	292 50		292 50	292					6 50							250
4 50	175 50		175 50	175	500											700
10 50	409 50		409 50	409	1200	150										1500
10 50	409 50		409 50	309	800	258	100									1000
6 00	258 00		258 00	254	700											1000
6 00	246 00		246 00	236	450											700
9 60	460 80		460 80	420	1000		40									1500
12 00	600 00		600 00	450	100		50	100			2000					2000
3 00	78 00		78 00													
7 50	262 50		262 50					75		3 00				10 mo	\$20	75

† Lives with parents and pays no stated amount for board.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks' lost.	
H. BREWER & CO., TROUMSEH.												
Molder	25	U. S.	Germany	m	1	1			2	52		
	23	"	U. S.	m	1	1			1	51	1	holidays
Machinist	54	"	"	m	1	1	1		2	51	1	sick
"	43	"	"	m	5	5	4		6	40	12	accident
"	42	"	"	m	7	7	5		8	51	1	out of work
"	37	"	"	m	2	2	1		3	52		
Engineer	49	"	"	m	2	2	1		3	52		
Machinist	51	"	"	m	2	2	1		3	50	2	sick
"	27	"	"	m	1	1			2	51	1	holidays
"	41	"	"	m	2	2	2		3	50	2	vacation
Blacksmith	44	"	"	m	4	3	2		4	50	3	"
Machinist	25	"	England	m	1	1			1	52		
Wood worker	45	"	U. S.	m	2	2			3	48	4	out of work
"	46	"	"	m	1	1			2	52		
Machinist	44	"	"	m			1		2	52		
Wood worker	50	"	"	m	1	1			2	43	9	sick
Machinist	59	"	"	wr					1	51	1	"
Molder	38	"	"	wr			1		1	39	13	out of work
Pattern maker	47	Holland	Holland	m	4	4	2		5	52		
Machinist	57	Germany	Germany	m	6	3	2		4	52		
	37	Ireland	Ireland	m	4	4	3		5	50	2	sick
Laborer	62	Bohemia	Bohemia	m	1	1			1	51	1	holidays
Molder	27	Canada	England	m	1	1			2	52		
Wood worker	21	U. S.	Holland	s						39	13	going to school
Machinist	16	"	U. S.	s						29	23	out of work
Blacksmith	18	"	"	s						48	4	"
Molder	22	"	Holland	s						46	6	laid off
"	18	"	U. S.	s						39	13	laid off and sick
Laborer	23	"	"	s						50	2	sick and laid off
Molder	21	"	Ireland	s			2		2	50	2	laid off
"	20	"	"	s						35	17	out of work
J. R. HATLEY, TROUMSEH.												
Painter	50	England	England	m					1	46	6	vacation
Wood worker	50	U. S.	U. S.	m					1	51	1	holidays
Blacksmith	35	"	Ireland	m	1	1	1		2	49	3	sick
Trimmer	30	"	Canada	s						52		
Painter	19	"	U. S.	s						43	9	laid off
Wood worker	29	"	Ireland	s						41	8	vacation
JOHNSTON BROS., FERRYBURG.												
Helper	35	Holland	Holland	m	3	3	1		4	52		
Boiler maker	29	U. S.	U. S.	m	2	2			2	52		
"	33	Germany	Germany	m	4	4	2		5	47	5	laid off
Helper	43	Canada	Canada	m	3	2	2		3	52		
"	57	Holland	Holland	m	5				1	50	2	sick
Boiler maker	25	U. S.	U. S.	m	1	1			2	52		
Helper	55	Poland	Poland	m	7				1	50	2	sick
"	51	Germany	Germany	m	6	2	2		3	52		
Boiler maker	45	U. S.	"	m	3	3	3		4	50	2	sick

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amt of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$9 00	\$468 00	\$30	\$498 00	\$498					\$6 00							\$400
7 50	382 50	300	682 50	682					2 50							
12 00	612 00	150	762 00	512	\$1500		\$250					1	\$2 50			2400
12 96	673 92		673 92	373	2000			\$300			\$4000					4000
12 00	480 00		480 00	480	900	\$300										1000
7 50	382 50	250	632 50	632					5 00							400
10 00	520 00		520 00	470	650	80	50				3000					800
10 50	546 00		546 00	546					5 40		1500					400
11 70	585 00	48	633 00	533	1500		100				3000					2000
8 50	433 50		433 50	333				100	6 00							250
13 50	675 00		675 00	475				200	6 00		2500					800
10 80	540 00		540 00	490				50	8 50							500
7 50	390 00		390 00	340				50	3 00							1000
12 00	576 00		576 00	576	2000											2500
12 00	624 00		624 00	624	1000											1500
13 50	702 00		702 00	552	1200			150								7000
10 50	451 50		451 50	251	1600	1200	200									700
12 00	612 00		612 00	612	1800	300										2400
10 50	409 50		409 50	409	700											800
13 50	702 00	180	882 00	900	1400	200					1000			44		5000
10 80	561 60		561 60	561	1300									43		1500
8 50	425 00	75	500 00	400				100	12 50					22		700
7 50	382 50		382 50	324	300	75	18	40						38		600
15 00	780 00		780 00	730				50	7 00					20		600
7 50	292 50		292 50					* 50		free *						150
3 00	117 00		117 00													
3 00	144 00		144 00						\$1 50							200
12 60	579 60		579 60						3 50							
12 00	468 00		468 00						3 50							
7 50	375 00		375 00					40	2 50							
13 50	675 00		675 00					40	4 50							50
6 00	210 00		210 00						3 00							75
9 00	414 00		414 00	214	1000		200				2000			35		2000
9 00	459 00		459 00	392	1100	650	67									800
9 00	441 00		441 00	366				75	7 50		6000					700
12 00	624 00		624 00					300		3 00						
7 50	322 50		322 50							2 25						50
12 00	528 00		528 00							3 50						80
9 00	468 00		468 00	450	600									16	\$60	900
15 00	780 00		780 00	680	700		100							8	45	1000
12 00	564 00		564 00	560					7 00					8	100	500
9 00	468 00		468 00	460					7 00					100		750
9 00	450 00		450 00	450					8 00			1	5 00	7	80	650
13 50	702 00		702 00	600	800	300	100									1200
9 00	450 00		450 00	450					7 00					19	50	560
9 00	468 00		468 00	468					7 00					15	25	600
15 00	750 00		750 00	700	700		50					1	5 00			1100

* Lives at home and gives wages to parents.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Helper.....	41	Holland.	Holland.	m	5	2	2	—	3	46	6	sickness
Boiler maker.....	44	Germany.	Germany.	m	6	4	4	—	5	48	4	sick
Helper.....	48	Sweden.	Sweden.	m	5	3	3	—	4	50	2	"
Boiler maker.....	46	Holland.	Holland.	m	4	3	3	—	4	52	—	"
".....	24	U. S.	Canada.	m	1	—	—	—	1	52	—	"
Helper.....	48	Scotland.	Scotland.	m	5	2	1	—	3	52	—	"
Boiler maker.....	43	Sweden.	Sweden.	m	4	4	2	—	5	50	2	sick
".....	51	Germany.	Germany.	m	5	2	2	—	3	50	1	"
".....	43	"	"	m	5	2	2	—	3	51	1	"
".....	37	"	"	m	4	4	4	—	5	52	—	"
".....	27	U. S.	"	m	2	—	—	1	4	49	3	sick
".....	35	Germany.	"	m	2	3	2	—	4	52	—	"
".....	49	U. S.	U. S.	m	4	1	—	—	2	51	1	sick
".....	43	Holland.	Holland.	m	5	4	3	—	5	50	2	"
".....	52	U. S.	Germany.	wr	5	1	—	—	1	49	3	"
".....	60	Germany.	"	wr	7	—	—	—	—	45	7	"
Helper.....	21	Holland.	Holland.	s	—	—	—	—	—	42	10	out of work
Rivet boy.....	19	U. S.	"	s	—	—	—	—	—	45	7	laid off
".....	19	Canada.	"	s	—	—	—	—	—	52	—	"
Helper.....	21	Germany.	"	s	—	—	—	—	—	48	4	sick
Rivet boy.....	18	Holland.	Holland.	s	—	—	—	—	—	46	6	"
Helper.....	25	Germany.	Germany.	s	—	—	—	—	—	50	2	"
Boiler maker.....	19	U. S.	Scotland.	s	—	—	—	—	—	49	3	"
".....	21	"	U. S.	s	—	—	—	—	—	52	—	"
".....	23	"	Holland.	s	—	—	—	—	—	52	—	"
PAGE BROS., MARSHALL.												
Finisher.....	27	"	Ireland.	s	—	—	—	—	—	43	9	laid off
Blacksmith.....	26	"	Germany.	s	—	—	—	—	—	50	2	vacation
Wood worker.....	19	"	U. S.	s	—	—	—	—	—	49	3	sick and laid off
".....	17	"	U. S.	s	—	—	—	—	—	26	26	out of work
".....	30	"	Ireland.	s	—	—	—	—	—	49	3	vacation
Driller.....	20	"	U. S.	s	—	—	—	—	—	43	9	out of work
Painter.....	25	"	Germany.	s	—	—	—	—	—	26	26	"
".....	16	"	U. S.	s	—	—	—	—	—	35	17	sick and laid off
".....	17	"	Germany.	s	—	—	—	—	—	51	1	sick
Trimmer.....	20	"	U. S.	s	—	—	—	—	—	39	13	laid off
".....	35	"	"	s	—	—	—	—	—	39	13	"
Laborer.....	20	"	"	s	—	—	—	—	—	32	20	out of work
Wood worker.....	26	Canada.	Canada.	s	—	—	—	—	—	35	17	sick and no work
".....	14	"	U. S.	s	—	—	—	—	—	43	4	accident
".....	55	Scotland.	Scotland.	m	2	2	—	—	3	39	13	sick and laid off
Laborer.....	32	U. S.	U. S.	m	1	1	—	—	2	39	13	out of work
Painter.....	33	"	"	m	—	—	—	—	—	1	50	laid off
Wood worker.....	33	"	"	m	—	—	—	—	—	1	35	sickness
".....	31	"	"	m	2	2	—	—	3	39	13	accident and laid off
".....	49	"	"	m	1	—	—	—	1	10	42	sick
".....	21	"	"	m	1	1	—	—	2	44	8	sick and laid off
Engineer.....	68	"	"	m	—	—	—	—	—	1	35	laid off
Wood worker.....	44	"	"	m	3	3	1	1	5	26	26	sick and no work
".....	41	"	"	m	3	3	2	—	4	39	13	sick and laid off
".....	44	"	"	m	—	—	—	—	—	1	45	accident

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.		If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.		
\$10 50	\$483 00		\$483 00	\$480					\$7 00					7	\$60
15 00	720 00		870 00	700	\$700	\$200	\$150							18	1200
15 00	750 00		750 00	680				\$65	8 00					17	30
9 00	468 00	150	618 00	606					9 00			1	\$5 00	6	50
15 00	780 00		780 00	709	900		80								1300
15 00	780 00	180	960 00	700	900		80	180				1	5 00	23	100
15 00	750 00		750 00	680	800		70							11	120
13 50	675 00		675 00	600				25	8 00					17	100
15 00	765 00		765 00	680	700		80					1	5 00	13	50
15 00	780 00		780 00	700	700		80					1	5 00	15	40
15 00	735 00		735 00	700					7 00			1	5 00		650
15 00	780 00		780 00	700					9 00					13	35
15 00	765 00		765 00	675	700		80								1000
15 00	750 00		750 00	650	800		100							17	50
13 50	661 50		661 50	650					8 00						550
13 50	607 50		607 50					300		\$4 00				17	75
6 00	252 00		252 00					*		*				5	
7 50	337 50		337 50							4 00				8	
6 00	312 00		312 00							3 00					
6 00	288 00		288 00					25		3 50				6	60
9 00	414 00		414 00					150		3 50				16	
6 00	300 00		360 00					60		3 00				9	225
9 00	441 00		441 00					150		3 50				4	25
7 50	380 00		380 00							3 50					550
12 00	624 00		624 00					200		4 00					300
13 50	702 00		702 00					200		3 50					360
12 00	516 00		516 00							3 00					100
12 00	600 00		600 00							4 00					1300
6 00	294 00		294 00					100		3 50					200
7 50	195 00		195 00					50		free					1000
9 00	441 00		441 00							3 00	\$1000			9	500
12 00	516 00		516 00					50		free					60
10 00	260 00		260 00					100		3 00					1200
5 00	175 00		175 00					*		3 00					
2 00	102 00		102 00							*					
3 00	117 00		117 00							†					
12 00	468 00		468 00							3 50					
6 00	192 00		192 00							3 00					100
9 00	314 00		314 00					100		3 50	8000	1	15 00	10	500
2 50	120 00		120 00							free					
8 00	312 00		312 00	312					6 00					35	800
7 50	292 50		292 50	292					5 00						800
10 50	525 00		525 00	325				200	7 00						800
10 50	387 50		387 50	387	800	500									500
7 50	292 50		292 50	292					5 00						
7 50	75 00	120	195 00	195					5 00						500
9 00	396 00		396 00	346				50	8 00						1000
7 50	262 50		262 50	262	800						325				1400
9 00	234 00		234 00	234					3 75		3500				150
12 00	468 00		468 00	468					5 00						500
10 50	504 00		504 00	501					7 00						500

* Lives at home and gives wages to parents.

Lives at home and pays no stated amount for board.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Wood worker	26	U. S.	U. S.	m	1	1			2	26	26	out of work
"	42	"	"	m	4	4	3		5	46	6	accident
"	70	"	"	m					1	39	13	laid off
"	32	"	"	m	4	4	3		5	52		
"	27	"	"	s				1	1	39	13	sick and laid off
CHAS. ALLEN, JONESVILLE.												
Cooper	17	U. S.	"	s						43	9	out of work
"	31	"	"	s						39	13	"
"	22	"	"	s						39	13	"
"	54	"	"	s						46	6	laid off
"	26	"	"	m	3	3	1		4	35	17	out of work
"	66	"	"	m					1	48	4	laid off
"	44	"	Germany	m	4	4	2		5	46	6	out of work
J. J. DEAL, JONESVILLE.												
Blacksmith	23	Canada	Ireland	s						39	13	"
Iron worker	19	U. S.	U. S.	s						43	9	"
Blacksmith	21	"	Ireland	s						50	2	laid off
Trimmer	19	"	U. S.	s						52		
"	20	"	Scotland	s						52		
Painter	21	"	U. S.	s						52		
"	26	"	"	m					1	46	6	laid off
Blacksmith	32	"	"	m	3	2			3	49	3	sick and laid off
"	29	Holland	Holland	m	1	1		1	3	47	5	sick
"	43	U. S.	U. S.	wr	1	1	1	1	2	52		
"	29	"	"	m					1	50	2	sick and laid off
Shipping clerk	37	"	"	m					1	52		
Wood worker	45	"	"	m	3	2	2		3	43	9	laid off
"	54	"	"	m	2	1			3	51	1	holidays
"	45	"	Germany	m	5	5	2		6	51	1	"
"	32	Canada	England	wr						51	1	"
Trimmer	33	U. S.	U. S.	m					1	52		
Painter	29	"	Germany	m	1	1		1	3	49	3	laid off and vacation
"	49	"	U. S.	m	3	3	1	1	5	39	18	laid off and sick
Engineer	30	"	"	m	2	2	1		3	48	4	sick
ROUGH BROS.' WAGON WORKS, BUCHANAN.												
Laborer	30	U. S.	U. S.	s				1	1	51	1	holidays
Wood worker	18	"	"	s						49	3	vacation
Blacksmith	27	"	Germany	s						51	1	holidays
Wood worker	27	"	U. S.	s				1	1	50	2	out of work
"	44	"	"	wr	1	1	1		1	51	1	holidays
"	23	"	"	m					1	48	4	out of w'k & vacation
"	43	"	"	m	3	3	2		4	43	9	laid off and sick
"	69	"	"	m					1	48	4	sick and laid off
"	46	"	"	m	1				1	52		
Shipping clerk	52	"	"	m	2	2	1		3	51	1	holidays
Blacksmith	75	"	England	m	2	2	2		3	51	1	"
Machinist	46	"	"	m	1	1	1		2	51	1	"
Engineer	60	"	U. S.	m	1	1	1		2	51	1	"
Wood worker	28	"	"	m	1	1			2	41	11	out of work
Blacksmith	50	"	"	m	1	1	1		2	26	26	"

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Weekly wages.	Income.			Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States	Present worth.
	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$18 00	\$468 00		\$468 00	\$268				\$100	\$5 00							\$400
12 00	552 00		552 00	552					7 00							800
12 00	468 00		468 00	468					6 00							1000
15 00	780 00		780 00	780					8 00		\$1000	1	\$5 00			1000
6 00	234 00		234 00	234					+							
6 00	258 00		258 00					*		*						
7 00	273 00		273 00							\$3 50						45
7 00	273 00		273 00							3 00						100
8 00	368 00		368 00					50		3 50						300
7 50	262 50		262 50	262					4 00							150
8 00	384 00		384 00	384	\$500											600
8 00	368 00		368 00	318				50	7 00		1000					500
9 00	117 00		117 00							3 00						
7 50	322 50		322 50							3 00						
6 50	325 00		325 00							3 00						40
8 25	169 00		169 00							1 50						25
4 50	234 00		234 00							3 00						50
9 00	468 00		468 00							4 00						100
8 00	368 00		368 00	368					4 70							800
6 00	294 00		294 00	294					4 50							400
7 00	329 00		329 00	329					free					10	\$100	700
15 00	780 00		780 00							7 00	1000					1000
9 00	450 00		450 00	390	400		\$25	35			3000					800
8 10	421 20		421 20	421					8 70							500
9 00	387 00		387 00	337	600			50			2000					1200
8 00	408 00	\$48	456 00	456					4 50							200
12 00	612 00		612 00	562	600			50								1200
16 50	841 50	100	941 50							4 00						150
15 00	780 00	100	880 00	555	500	\$200	75	250								1200
12 00	588 00	110	698 00	498				200	7 00		2000					800
9 00	351 00		351 00	351					6 00							500
9 00	432 00		432 00	432					5 00							400
7 50	382 50	6	388 50	296				90		+						20
7 00	343 00		343 00							3 50						100
8 00	408 00		408 00					100		3 50						400
7 00	350 00		350 00	350					4 00							300
9 00	459 00		459 00					100		†						
10 00	480 00		480 00	330				150	5 50							300
8 00	344 00	72	416 00	416					5 00							300
7 00	336 00	80	366 00	366	1200		20									1500
18 00	936 00		936 00	300	2000		500	186			3000					4000
9 00	459 00		459 00	459					5 00							1500
6 75	344 75	75	419 75	394	500		25									700
8 00	408 00		408 00	383	400		25									500
9 00	459 00		459 00	389	700	75	40	30								900
10 00	410 00		410 00	410					4 00							350
12 00	312 00		312 00	312					6 00							250

* Lives at home and gives wages to parents.

† Lives at home and pays no stated amount for board.

‡ Lives at home and supports family.

LABOR AND INDUSTRIAL STATISTICS.

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Occupation.	Age.	Nativity.		Married or single.	Families.					Time.		Cause for loss of time.
		Where born (country).	Nativity of parents.		No. of children in family.	No. of children supported.	No. attending school.	No. supported besides wife and children.	Total No. supported.	No. of weeks worked.	No. of weeks lost.	
Blacksmith.....	35	U.S.	U.S.	m	3	3	2		4	35	17	out of work
Machinist.....	31	"	"	m	3	3	1	1	5	51	1	holidays
Blacksmith.....	35	"	"	m	1	1	1	1	3	51	1	"
Painter.....	23	"	"	m					1	35	17	out of work
Wood worker.....	52	"	"	m	1	1	1		2	50	2	holidays & vacation
".....	55	"	"	m	2	1	1		3	48	4	laid off
INDUSTRIAL MFG. CO., BUEHAWAN.												
Machinist.....	52	U.S.	"	m					1	39	12	out of work
Wood worker.....	35	"	"	m	1	1	1		2	49	3	laid off
Machinist.....	29	"	"	m	2	2	1	1	4	31	21	out of work
Painter.....	25	"	"	m	1	1			2	49	3	laid off and vacation
Laborer.....	42	"	"	m	2	2	2		3	39	12	laid off

TABLE No. 13.—CONTINUED.—*Showing Individual Reports.*

Income.				Annual family expenses.	Homes.		Savings.		Rent and board.		Insurance.			If foreign born, No. of years in United States.	If foreign born, amount of money on arrival in United States.	Present worth.
Weekly wages.	Annual earnings.	Other sources.	Total annual income.		If owning home, its value.	If in debt on home, am't.	Amount paid on home during the year.	Amount saved aside from payments on home.	If renting, monthly rental.	If boarding, cost per week, including room.	Amount of life insurance.	No. of benefit societies.	Weekly benefit in case of sickness or accident.			
\$10 00	\$350 00	---	\$350 00	\$350	---	---	---	---	\$4 00	---	---	---	---	---	---	\$150
6 30	321 30	---	321 30	191	350	43	120	---	6 00	---	---	---	---	---	---	375
12 00	612 00	---	612 00	582	---	---	---	30	6 00	---	\$3000	---	---	---	---	1100
8 00	280 00	---	280 00	280	---	---	---	---	3 50	---	---	---	---	---	---	180
10 00	500 00	\$50	550 00	510	800	---	46	---	---	---	1000	---	---	---	---	2000
10 50	504 00	---	504 00	464	2500	200	40	---	---	---	---	---	---	---	---	\$508
10 50	409 50	---	409 50	324	1000	---	23	60	---	---	---	---	---	---	---	1300
9 00	441 00	---	441 00	416	500	---	---	---	---	---	---	---	---	---	---	900
10 50	325 50	---	325 50	205	---	---	---	60	free	---	---	---	---	---	---	60
10 50	514 80	---	514 80	514	---	---	---	---	6 00	---	2000	---	---	---	---	300
6 00	234 00	---	234 00	234	480	---	---	---	---	---	---	---	---	---	---	630

SUMMARY OF TABLE 13.

ANN ARBOR.

Ninety-one employ  es were canvassed: F. Wagner & Bros., 6; Hunter & Turnbull (manufacturers of Corliss engines, vertical engines and boilers), 7; Walker & Co., (manufacturers of carriages), 11; A. P. Ferguson (manufacturer of road carts, wagons and carriages), 16; Ann Arbor Agricultural Co. (manufacturers of farm implements), 51.

Nationality: Americans, 65; Germans, 11; Canadians, 9; Englishmen, 4; Irishmen, 2. 71+per cent are Americans and 29-per cent foreigners. Of the foreigners 42+ are Germans; 34+per cent Canadians; 15+per cent Englishmen and 8-per cent Irishmen. Parentage of those born in the United States: American, 41; German, 19; Irish, 4; English, 1. 63+per cent have American and 37-per cent foreign parents. 52 are married, 38 single and 1 a widower. 57+per cent are married, 42-per cent single and 1+per cent widowers. 34 support self only; 1 supports others than self by boarding, and 56 support families: Americans, 36; Germans, 9; Canadians, 6; Englishmen, 4; Irishman, 1. In 56 families there are 114 children, of whom 99 are supported. 9 married men have no children: 7 or 77+per cent are Americans; 1 German and 1 Englishman. Of the children supported 22 are under 5 years of age; 74 are 5 years of age and under 20, and 3 are over 20. 57 attend school, which is 77+per cent of school age. 52 or 91+per cent attend the public schools and 5 parochial. Number of persons supported in families, 160; by boarding, 1. 9 employ  es support 10 persons besides wife and children. Total number of weeks worked during the year, 3,913; average, 43. 62 men or 70-per cent lost 1,156 weeks, or 22 years and 12 weeks. Cause of lost time: vacation, 1; laid off, 28; sick and no work, 3; shut down, 1; no work, 19; sick and laid off, 5; worked for self, 1; sickness, 3; accident, 1. Total annual earnings, \$34,360; average, \$377.58. Total income from other resources, \$3,713, as follows: family earnings, \$1,101; boarding, \$208; heirship, \$1,000; pensions, \$168; interest, \$185; rent, \$315; other sources, \$736. Total annual earnings of Americans, \$24,249.40; average, \$373.06; Germans, \$3,804.50; average, \$345.86; Canadians, \$4,006.50; average, \$445.16; Englishmen, \$1,639.60; average, \$409.90; Irishmen, \$660; average, \$330. Average weekly wages of married men, \$10.45; single men, \$6.30; all employ  es, \$8.71. Wages paid per week: five employ  es \$3 each; one, \$3.65; five, \$4; one, \$4.50; three, \$5; eleven, \$6; one, \$6.90; two, \$7; seven, \$7.50; one, \$8.10; three, \$8.40; sixteen, \$9; three, \$10; seven, \$10.50; one, \$10.80; three, \$11.40; fourteen \$12; one, \$12.50; one, \$13.50; two, \$14; two, \$15; one \$18.

Total family expenses, \$23,974; per capita, \$110.99. Americans, \$15,963; per capita, \$121.85; Canadians, \$2,373; per capita, \$118.65; Germans, \$4,089; per capita, \$87; Englishmen, \$1,312; per capita, \$33.71; Irishmen, \$237; per capita, \$59.25. Number owning homes, 27: Americans, 15; Canadians, 4; Germans, 5; Englishmen, 2; Irishmen, 1. 26 married men and 1 single man own homes. 50 per cent of married men own homes. 55+per cent of home owners are Americans and 45-per cent foreigners. Total value of homes, \$29,775; average, \$1,102.77; Americans, \$18,350; average, \$1,223.33; Germans, \$5,200; average, \$1,040; Canadians, \$4,175; average, \$1,043.75; Englishmen, \$1,250; average, \$625; Irishmen, \$800; average, \$800. The homes of 16 employ  es are mortgaged, which is 59+per cent. Value of mortgaged homes, \$15,975; mortgaged for \$7,400, which is 46+per cent of valuation. The homes of 8 Americans are mortgaged for \$4,450; 4 Germans for \$1,250; 2 Canadians, \$700; 1 Englishman, \$700; 1 Irishman, \$300. During the year 15 employ  es made payments and improvements upon homes amounting to \$1,304, and 18 men saved \$2,785 in money. Total number of employ  es who saved, 32, which is 35+per cent. Total savings, including payments and improvements upon

homes, \$4,089, which is 12-per cent of total earnings. Total present worth of 73 employés (18 not reporting), \$59,390; average, \$813.56; Americans, 49; total, \$41,535; average, \$848.67; Germans, 9; total, \$7,580; average, \$842.22; Canadians, 9; total, \$6,975; average, \$775; Englishmen, 4; total, \$2,250; average, \$562.50; Irishmen, 2; total, \$1,000; average, \$500. One employé is worth \$10,000. Four Canadians had \$181 upon arrival in this country; 1 German, \$40; 1 Englishman, \$20. Total present worth of foreigners, \$17,805. Number renting homes, 26: Americans, 19; Canadians, 2; Germans, 3; Englishmen, 2. One single man rents and 1 has rent free. 48+per cent of married men and 29-per cent of total employés rent. Total monthly rent, \$149.58; average, \$5.75. Total annual rent, \$1,794.96; average, \$69.03. Per cent of rent to earnings, .15+; per cent of rent to expenses, .15-. Total monthly rent of Americans, \$110.08; average \$5.79; Canadians, \$14.50; average, \$7.25; Germans, \$14.50; average, \$4.83; Englishmen, \$10.50; average, \$5.25.

Number of employés boarding, 20, which is 22-per cent of total. 12 live at home and give wages to parents; 2 live at home and support family, and 3 live at home and pay no stated amount for board. Total weekly board, \$61; average, \$3.05; Americans, 16; total \$48; average, \$3; Canadians, 3; total, \$9.50; average, \$3.17; Irishmen, 1; total, \$3.50. 5 keep an itemized account of their expenses, which is 5+per cent of total. 44 own sewing machines, which is 79-per cent of those supporting families. 38 own musical instruments, which is 42-per cent. Number of musical instruments: Pianos, 3; organs, 11; guitars, 4; violins, 7; accordion, 1; banjos, 4; piccolos, 2; flutes, 3; organette, 1; melodeons, 2; cornet, 1; trombone, 1; horns, 2; harp, 1; bass viola, 2; zither, 1. Number of employés who take newspapers and magazines, 72: Americans, 53; Canadians, 8; Germans, 8; Englishmen, 3. 79+per cent take newspapers and magazines, of which 74-are Americans. Number taking dailies, 43; story, 15; sporting, 1; religious, 4; labor, 1; scientific, 2; local and other weekly newspapers, 66; magazines, 8.

Seventy work at hand and 21 at machine work. 5 men, or 5+per cent have been injured since engaged as employés. 3 reported that their labor organization had been of financial benefit to them, and 2 no financial benefit. Other than financially, 2 reported that their labor organization had been of benefit socially and educationally; 1 educationally and 2 no benefit. 18 carry life insurance amounting to \$21,115; average, \$1,173.05; Americans, 11; total, \$13,590; Canadians, 3; total, \$3,500; Germans, 3; total, \$3,025; Englishmen, 1; total, \$1,000. 20-per cent of employés are insured. 14 belong to benefit societies: Americans, 9; total weekly benefit, \$36; average \$4; Canadians, 1; total, \$5; Germans, 3; total, \$11; average, \$3.67; English, 1; total, \$4. Total weekly benefit, \$56; average, \$4. 15+per cent belong to benefit societies.

PLYMOUTH.

Eighty-eight employés were canvassed: Chas. Brems, 5; L. H. Bennett (manufacturer of fanning mills), 6; Plymouth Iron and Wind Mill Co. (manufacturers of wind mills and air rifles), 11; Plymouth Air Rifle Co. (manufacturers of air rifles), 14; Markham Air Rifle Co., 52.

Nationality: Americans, 80; Canadians, 4; Scotchmen, 2; Frenchman, 1; Irishman, 1. 91-per cent are Americans and 9+per cent foreigners. Parentage of those born in the United States: American, 65; German, 6; English, 4; Irish, 3; Scotch, 2. 81+per cent have American, and 19-per cent foreign parents. 46 are married, 37 single and 5 widowers. 52+per cent are married, 42+ single and 6-per cent widowers. 37 support self only; 2 support others than self by boarding, and 49 support families: Americans, 44; Canadians, 2; Scotchmen, Frenchmen and Irishmen, 1 each. In 49 families there are 71 children, 66 of whom are supported. 9 married men, all Americans, have no children. Of the children supported, 23 are under 5 years of age; 39 are 5 and under 20, and 4 are over 20. 28 attend school, which is 72-per cent of school age. All attend the public schools. Number of persons supported in families, 120; supported by boarding, 3. 8 employés support 11 persons besides wife and children. Total number of weeks worked during the year, 3,933; average, 45.2+. 72 men or 82-per cent lost 593 weeks or 11 years and 21 weeks. Cause of lost time: Laid off, 17; vacation, 9; sickness and laid off, 6; no work, 15; sickness, 11; sickness and no work, 5; accident, 1; accident and laid off, 1; at school, 1; laid off and vacation, 1; sickness and vacation, 4; no work and vacation, 1. Total annual earnings, \$3,656.35; average, \$382.46. Total income from other resources, \$1,380, as follows: Boarding, \$300; pensions, \$576; interest, \$194; rent, \$50; other sources, \$260. Total annual earnings of Americans, \$29,796.85; average,

\$372.46; Canadians, \$2.037; average, \$509.25; Scotchmen, \$688.50; average, \$344.25; Frenchman, \$588; average, \$588; Irishman, \$546; average, \$546. Average weekly wages of married men, \$9.10; single men, \$7.32; all employes, \$8.35. Wages paid per week: One employe, \$3; four, \$1.50; one, \$1.75; one, \$5; one, \$5.40; eleven, \$6; one, \$6.25; one, \$6.50; three, \$6.60; one, \$6.75; one, \$6.90; eight, \$7; one, \$7.38; fourteen, \$7.50; five, 8; one, \$8.75; one, \$8.76; eight, \$9; one, \$9.60; two, \$10; two, \$10.50; fourteen, \$12; three, \$13.50; two, \$15.

Total family expenses, \$18,952; per capita, \$112.14; Americans, \$16,323; per capita, \$106.69; Canadians, \$907; per capita, \$151.17; Scotchmen, \$588; per capita, \$196; Frenchmen, \$588; per capita, \$196; Irishmen, \$546; per capita, \$136.50. Number owning homes, 15; Americans, 14; Canadian, 1. All home owners are married. 32+per cent of married men own homes. 93+per cent of home owners are Americans and 7-per cent foreigners. Total value of homes, \$15,800; average, \$1,053.33; Americans, total, \$13,300; average, \$950; Canadian, 1; total, \$2,500. 5 are mortgaged, which is 33+per cent. Value of mortgaged homes, \$5,200; mortgaged for \$1,950, which is 37+per cent of valuation. The homes of four Americans are mortgaged for \$1,150; 1 Canadian for \$800. During the year 8 men made payments and improvements upon homes amounting to \$328, and 43 saved \$4,700 in money. Total number of employes who saved, 45, which is 51+per cent. Total savings, including payments and improvements upon homes, \$5,028, which is 15-per cent of earnings. Total present worth of 79 employes (9 not reporting), \$50,915; average, \$644.49; Americans, 72; total, \$42,565; average, \$591.18; Canadians, 4; total, \$4,950; average, \$1,237.50; Scotchman, 1; total, \$2,500; Frenchman, 1; total, \$300; Irishman, 1; total, \$600. 2 Canadians had \$1,300 upon arrival in this country. Total present worth of foreigners, \$3,350. Number renting homes, 29; Americans, 25; Canadian, Scotch, French, and Irish, 1 each. 2 renters are widowers and 2 have rent free. 58+per cent of married men and 33-per cent of total employes rent. Total monthly rent, \$149; average, \$5.14. Total annual rent, \$1,788; average, \$61.65. Per cent of rent to earnings, 15+. Per cent of rent to expenses, 15+. Total monthly rent of Americans, \$132.50; average \$5.30; Canadian, 1; total, \$5; Scotchman, 1; total, \$2.50; Frenchman, 1; total, \$5; Irishman, 1; total, \$4.

Number of employes boarding, 31, which is 35+per cent. 1 employe lives at home and gives wages to parents; 3 live at home and support family; 6 live at home and pay no stated amount for board. Total weekly board, \$94; average, \$3.03; Americans, 28; total, \$84.25; average, \$3.01; Canadians, 2; total, \$6.75; average, \$3.37; Scotchman, 1; total, \$3. 15 employes keep an itemized account of their expenses, which is 17+per cent. 36 own sewing machines, which is 73+per cent of those supporting families. 32 own musical instruments, which is 36+per cent. Number of musical instruments: Pianos, 3; organs, 15; violins, 6; guitars, 4; horns, 3; accordions, 2; clarionets, 2; trombone, 1; flutes, 2; melodeon, 1; banjo, 1. Number of employes who take newspapers and magazines, 52: Americans, 46; Canadians, 4; Scotchman, 1; Irishman, 1. 59+per cent take newspapers and magazines, of which 88+per cent are Americans. Number of dailies taken, 36; story, 4; sporting, 2; religious, 4; labor, 1; scientific, 4; local and other weekly papers, 43; magazines, 7.

Forty-one work at hand and 41 at machine work, and 6 at both. 5 men, or 6-per cent have been injured since engaged as employes. 5 reported that their labor organization had been of financial benefit to them, and three no financial benefit. Other than financially, 7 reported that their labor organization had been of benefit socially and educationally, and 1 no benefit. 4 carry life insurance amounting to \$6,000; average \$1,500; Americans, 3; total, \$5,000; Canadian, 1; total, \$1,000. 5-per cent of employes are insured. 14 belong to benefit societies: Americans, 12; total, \$54; average, \$4.50; Canadian, 1; total, \$4; Frenchman, 1, total, \$4. Total weekly benefit, \$62; average, \$4.43. 16-per cent belong to benefit societies.

ADRIAN.

Seventy-five employes were canvassed: Kells & Sons, 9; C. W. Rose (manufacturer of wheelbarrows), 10; Adrian Brick and Tile Machine Co. (manufacturers of brick and tile machines), 22; Page Woven Wire Fence Co. (manufacturers of woven wire fence), 31.

Nationality: Americans, 61; Germans, 10; Englishmen, 2; Irishmen, 2. 81+per cent are Americans and 19-per cent foreigners. Of the foreigners 71+per cent are Germans; 14+per cent Englishmen and 14+per cent Irishmen. Parentage of those born in the

United States: American, 43; German, 10; English, 3; Canadian, 2; Irish, Scotch and Holland, 1 each. 70+per cent have American and 30-per cent foreign parents. 48 employes are married, 25 single and 2 widowers. 64 per cent are married, 33+per cent single and 2+per cent widowers. 24 support self only; 1 supports others than self by boarding, and 50 support families: Americans, 38; Germans, 8; English and Irish, 2 each. In 50 families there are 105 children, of whom 97 are supported. 11 married men have no children: 10 are Americans and 1 German. Of the children supported 25 are under 5 years of age; (3 are 5 and under 20, and 9 are over 20. 44 attend school, which is 69+per cent of school age. 31 or 70+per cent attend the public schools; 6 parochial and 7 select. Number of persons supported in families, 152; by boarding, 2. 7 employes support 9 persons besides wife and children. Total number of weeks worked during the year, 3,350; average, 44.6+. 62 men, or 83-per cent lost 550 weeks, or 10 years and 30 weeks. Cause of lost time: Laid off, 16; holidays, 4; sickness, 9; no work, 11; vacation, 5; sickness and no work, 4; holidays and laid off, 1; accident and no work, 1; shut down, 1; accident, 3; laid off and sickness, 5; accident and vacation, 1; accident and sick, 1. Total annual earnings, \$30,491.20; average, \$406.55. Total income from other resources, \$1,619, as follows: Family earnings, \$156; boarding, \$200; pensions, \$288; interest, \$250; rent, \$370; other sources, \$355. Total annual earnings of Americans, \$24,819.20; average, \$406.87; Germans, \$4,295; average, \$429.50; Englishmen, \$350.50; average, \$425.25; Irishmen, \$526.50; average, \$263.25. Average weekly wages of married men, \$10.04; single men, \$7.13; all employes, \$9.07. Wages paid per week; one employe, \$3.50; three, \$4; two, \$5; five, \$6; one, \$6.50; two, \$6.75; four, \$7; twelve, \$7.50; one, \$7.85; three, \$8; one, \$8.40; eight, \$9; one, \$9.80; four, \$10; one, \$10.25; eight, \$10.50; one, \$10.80; two, \$11; ten, \$12; one, \$13; one, \$13.40; two, \$15; one, \$21.60.

Total family expenses, \$22,086; per capita, \$109.34; Americans, \$16.838; per capita, \$130.53; Germans, \$3.811; per capita, \$79.40; Englishmen, \$711; per capita, \$64.64; Irishmen, \$726; per capita, \$51.86. Number owning homes, 29; Americans, 22; Germans, 4; Englishmen, 2; Irishmen, 1. 27 married men and 2 widowers own homes. 56+per cent of married men own homes. 76-per cent of home owners are Americans, and 24+per cent foreigners. Total value of homes, \$30,550; average, \$1,053.44; Americans, \$24,500; average, \$1,113.63; Germans, \$3,850; average, \$962.50; Englishmen, \$1,500; average, \$750; Irishman, \$700; average, \$700. The homes of 12 employes are mortgaged, which is 41+per cent. Value of mortgaged homes, \$10,350; mortgaged for \$3,187, which is 31-per cent of valuation. The homes of 9 Americans are mortgaged for \$2,900; 1 German for \$100; 2 Englishmen, \$187. During the year 10 employes made payments and improvements upon homes amounting to \$869, and 25 men saved \$2,520 in money. Total number of employes who saved, 33, which is 44 per cent. Total savings, including payments and improvements upon homes, \$3,389, which is 11+per cent of total earnings. Total present worth of 62 employes (13 not reporting), \$62,350; average, \$1,005.64; Americans, 49; total, \$51,900; average, \$1,059.18; Germans, 9; total, \$6,900; average, \$766.66; Englishmen, 2; total, \$1,900; average, \$950; Irishmen, 2; total, \$1,650; average, \$825. 3 employes are worth \$5,000 each. 2 Germans had \$700 upon arrival in this country. Total present worth of foreigners, \$10,450. Number renting homes, 20; Americans, 15; Germans, 4; Irishman, 1. All renters are married men. 41+per cent of married men and 27-per cent of total employes rent. Total monthly rent, \$97.50; average, \$4.88. Total annual rent, \$1,170; average, \$58.50. Per cent of rent to earnings, .14+; per cent of rent to expenses, .15-. Total monthly rent of Americans, \$74.50; average, \$4.97; Germans, \$17; average, \$4.25; Irishman, \$6; average, \$6. Number of employes boarding, 21, which is 28 per cent of total. 4 live at home and give wages to parents; 1 lives at home and supports family; 1 lives at home and pays no stated amount for board. Total weekly board, \$60.25; average, \$2.87; Americans, 19; total, \$55.25; average, \$2.91; Germans, 2; total, 5; average, \$2.50. 10 keep an itemized account of their expenses, which is 13+per cent. 44 own sewing machines, which is 88 per cent of those supporting families. 19 own musical instruments, which is 25+per cent. Number of musical instruments: Piano, 1; organs, 8; accordions, 3; guitars, 2; drums, 2; violins, 2; banjo, 1; horn, 1. Number of employes who take newspapers and magazines, 55: Americans, 42; Germans, 9; Englishmen, 2; Irishmen, 2. 73+per cent take newspapers and magazines, of which 76+per cent are Americans. Number taking dailies, 36; story, 4; religious, 10; scientific, 2; local and other weekly papers, 37; magazines, 8.

Thirty-one work at hand and 35 at machine work and 9 at both. 7 men, or 9+per cent have been injured since engaged as employes. 1 reported that his labor organization had been of financial benefit to him, and 1 no financial benefit. Other than financially, 1 reported that his labor organization had been of benefit socially and educationally and 3 educationally. 16 carry life insurance, amounting to \$14,445; average, \$902.81; Americans, 10; total, \$11,810; Germans, 4; total, \$1,910; Englishmen, 2; total, \$725.

21+per cent carry life insurance. 16 belong to benefit societies: Americans, 10; total, \$39.80; average, \$3.98; Germans, 4; total, \$16; average, \$4; Englishmen, 2; total, \$8.20; average, \$4.10. Total weekly benefit, \$64; average, \$4. 21+per cent belong to benefit societies.

SAGINAW.

Sixty-four employes were canvassed: Koehler Bros. (blacksmith and machine jobbing shop), 8; Powers Block Machine Works (manufacturers of lath and stove machinery), 9; Michigan Saw Works (manufacturers of saws), 9; Morley Bros. (manufacturers of harness and lumbering tools), 10; McClellan File Co., 28.

Nationality: Americans, 38; Germans, 15; Canadians, 8; Irishman, 1; Scotchman, 1; Austrian, 1. 59+per cent are Americans and 41-per cent foreigners. Of the foreigners 58-per cent are Germans, 30+per cent Canadians, 4-per cent each Irish, Scotch, Austrian. Parentage of those born in the United States: Americans, 23; Germans, 5; Irish, 2; Canadian, 5; Scotch, 3. 61-per cent have American and 39+per cent foreign parents. 35 are married, 28 single and 1 widower. 55-per cent are married, 44-per cent single and 1-per cent widowers. There are employed two boys 15 years of age and one 14. 29 support self only, and 35 support families: Americans, 17; Germans, 14; Canadians, 4. In 35 families there are 83 children, of whom 77 are supported. Five married men have no children: 4 are Americans and 1 Canadian. Of the children supported 29 are under 5 years of age; 48 are 5 and under 20. 36 attend school, which is 75 per cent of school age. All attend the public schools. Number of persons supported in families, 112. Total number of weeks worked during the year, 3,223; average, 50.3+. 31 men or 48+per cent lost 105 weeks or 2 years and 1 week. Cause of lost time: Sickness, 25; vacation, 2; sickness and laid off, 2; laid off, 1; sickness and vacation, 1. Total annual earnings, \$34,562; average, \$540.03. Total income from other resources, \$582, as follows: Family earnings, \$430; interest, \$20; rent, \$132. Total annual earnings of Americans, \$20,493.50; average, \$539.30; Germans, \$9,293; average, \$619.53; Canadians, \$3,883; average, \$485.37; Irishman, \$367.50; average, \$367.50; Scotchman, \$150; average, \$150; Austrian, \$375; average, \$375. Average weekly wages of married men, \$12.23; single men, \$8.78; all employes, \$10.72. Wages paid per week: Four employes \$3 each; one, \$4; one, \$5; two, \$6; five, \$7.50; one, \$8; ten, \$9; one, \$9.50; five, \$10; three, \$10.50; four, \$11; eight, \$12; one, \$12.50; three, \$13.50; one, \$14; ten, \$15; one, \$16; three, \$18. Total family expenses, \$20,550; per capita, \$139.72; Americans, \$10,124; per capita, \$160.70; Germans, \$8,426; per capita, \$120.37; Canadians, \$2,000; per capita, \$142.85. Number owning homes, 19: Americans, 9; Canadian, 1; Germans, 9. All are married men. 54-per cent of married men own homes. 47+per cent of home owners are Americans and 53-per cent foreigners. Total value of homes, \$22,650; average, \$1,192.10; Americans, \$11,600; average, \$1,288.88; Germans, \$10,200; average, \$1,133.33; Canadian, \$850; average, \$850. The homes of 13 employes are mortgaged, which is 68+per cent. Value of mortgaged homes, \$12,650; mortgaged for \$3,300, which is 26+per cent of valuation. The homes of 6 Americans are mortgaged, \$1,200; 6 Germans, \$1,300; 1 Canadian, \$800. During the year 13 employes made payments and improvements upon homes amounting to \$1,040 and 17 men saved \$1,775 in money. Total number of employes who saved, 30, which is 47-per cent. Total savings, including payments and improvements upon homes, \$2,815, which is 8+per cent of total earnings. Total present worth of 55 employes (9 not reporting), \$46,010; average, \$836.54; Americans, 31; total, \$24,870; average, \$802.25; Canadians, 7; total, \$2,020; average, \$288.57; Germans, 15; total, \$18,975; average, \$1,265; Irishmen, 1; total, \$70; Austrian, 1; total, \$75. Seven Germans had \$540 upon arrival in this country; one Canadian, \$150. Total present worth of foreigners, \$21,140. Number renting homes, 15: Americans, 7; Germans, 5; Canadians, 3. One has rent free. 43-per cent of married men and 23+per cent of total rent. Total monthly rent, \$84.50; average, \$5.63. Total annual rent, \$1,014; average, 67.60. Per cent of rent to earnings, .12-. Per cent of rent to expenses, .12+. Total monthly rent of Americans, \$11.50; average, \$5.93; Germans, \$26; average, \$5.20; Canadians, \$17; average, \$5.66. Number of employes boarding, 21, which is 33-per cent of total. Seven live at home and give wages to parents. Total weekly board, \$78; average, \$3.71; Americans, 14; total, \$51; average, \$3.85; German, 1; total, \$3.50; Canadians, 4; total, \$14.50; average, \$3.62; Irishmen, 1; total, \$3; Austrian, 1; total, \$3. Four keep an itemized account of their expenses, which is 6+per cent. 27 own sewing machines; which is 77+per cent of those supporting families. 12 own musical instruments, which is 19-per cent. Number of musical instruments: Pianos, 2; organs, 6; violins, 3; guitars, 2. Number of employes who take newspapers and magazines, 35: Americans, 23; Germans, 9; Canadians, 3. 55-per cent take newspapers and magazines, of which 68-per

cent are Americans. Number of dailies taken, 33; local and other weeklies, 12; magazines, 1.

Seventeen work at hand and 38 at machine work and 9 at both. 16 carry life insurance amounting to \$29,700; average, \$1,856.25; Americans, 9; total, \$18,000; average, \$2,000; Germans, 4; total, \$6,700; average, \$1,675; Canadians, 3; total, \$5,000; average, \$1,666.66. 25 per cent are insured. One German belongs to a benefit society; weekly benefit, \$5.

MONTAGUE.

Sixty employes were canvassed, all in the Montague Iron Works (manufacturers of saw mill machinery, engines and boilers).

Nationality: Americans, 27; Germans, 14; Hollanders, 8; Canadians, 5; Scotchmen, 3; Swedes, 3. 45 per cent are Americans and 55 per cent foreigners. Of the foreigners 42+per cent are Germans; 21+per cent Hollanders; 15+per cent Canadians; 9+ per cent Scotchmen; 9+per cent Swedes. Parentage of those born in the United States: American, 12; German, 5; Canadian, 4; Holland, 4; Swede, 1; Swiss, 1. 44+per cent have American and 56-per cent foreign parents. 46 employes are married, 12 single and 2 widowers. 12 support self only, and 48 support families: Americans, 20; Germans, 10; Hollanders, 8; Canadians, 5; Swedes, 3; Scotchmen, 2. In 48 families there are 159 children, of whom 115 are supported. Of the children supported 24 are under 5 years of age, 89 are 5 and under 20, and 2 are over 20. 74 attend school, which is 83+ per cent of school age. All attend the public schools. Number of persons supported in families 165. 4 employes support 4 persons besides wife and children. Total number of weeks worked during the year, 2,965; average, 49.4+. 40 men or 66+per cent lost 155 weeks or 2 years and 51 weeks. Cause of lost time: Sickness, 39; holidays, 1. Total annual earnings, \$37,699; average, \$628.31. Total income from other resources, \$801, as follows: Family earnings, \$705; rent, \$96. Total annual earnings of Americans, \$18,099; average, \$670.33; Germans, \$7,455; average, \$532.50; Hollanders, \$5,267; average, \$658.37; Canadians, \$3,123; average, \$624.60; Scotchmen, \$1,766; average, \$588.66; Swedes, \$1,989; average, \$663. Average weekly wages of married men, \$13.70; single men, \$8.66; all employes, \$12.69. Wages paid per week: Two employes \$6 each; seven, \$7.50; nine, \$9; one, \$10.50, one, \$12; two, \$13; five, \$13.50; two, \$14; two, \$14.50; one, \$14.75; twenty-four, \$15; one, \$16; one, \$16.50; two, \$18. Total family expenses, \$29,177; per capita, \$136.98; Americans, \$12,535; per capita, \$147.47; Germans, \$5,828; per capita, \$124; Hollanders, \$4,760; per capita, \$144.24; Canadians, \$3,018; per capita, \$137.18; Scotchmen, \$1,281; per capita, \$98.54; Swedes, \$1,755; per capita, \$135. Number owning homes, 26: Americans, 14; Germans, 6; Hollanders, 4; Swedes, 2. 24 married men, one single man and 1 widower own homes. 52+per cent of married men own homes. 54-per cent of home owners are Americans and 46+per cent are foreigners. Total value of homes, \$21,550; average, \$828.84; Americans, \$12,100; average, \$864.28; Germans, \$4,650; average, \$775; Hollanders, \$3,100; average, \$775; Swedes, \$1,700; average, \$850. The homes of 11 employes are mortgaged, which is 42+per cent. Value of homes mortgaged, \$8,950; mortgaged for \$2,100; which is 23+per cent of valuation. The homes of 3 Americans are mortgaged for \$500; 4 Germans, \$700; 2 Hollanders, \$400; 2 Swedes, \$500. During the year 20 employes made payments and improvements upon homes amounting to \$2,430 and 21 saved \$2,350 in money. Total number who saved, 39, which is 65 per cent. Total savings, including payments and improvements upon homes, \$4,780, which is 13-per cent of total earnings. Total present worth of 54 employes, (6 not reporting) \$57,580; average, \$1,066.29; Americans, 24; total, \$28,050; average, \$1,168.75; Germans, 12; total, \$11,580; average, \$965; Hollanders, 8; total, \$7,500; average, \$937.50; Canadians, 5; total, \$3,950; average, \$790; Scotchmen, 2; total, \$2,900; average, \$1,450; Swedes, 3; total, \$3,600; average, \$1,200. 6 Germans had \$275 upon arrival in this country; 4 Hollanders, \$165; 4 Canadians, \$285; 2 Scotchmen, \$85; 3 Swedes, \$150. Total present worth of foreigners, \$29,530. Number renting homes, 22. Americans, 6; Germans, 4; Hollanders, 4; Canadians, 5; Scotchmen, 2; Swede, 1. 1 renter is a single man. 45+per cent of married men rent and 37-per cent of total. Total monthly rent, \$154; average, \$7. Total annual rent, \$1,848; average, \$84. Per cent of rent to earnings, .13+. Per cent of rent to expenses .14+. Total monthly rent of Americans, \$41; average, \$6.84; Germans, \$27; average, \$6.75; Hollanders, \$23; average, \$7; Canadians, \$33; average, \$6.60; Scotchmen, \$16; average, \$8; Swede, \$9; average, \$9.

Number of employes boarding, 11; which is 18+per cent of total. 1 lives at home and gives wages to parents. Total weekly board, \$39.75; average, \$3.61. Americans, \$7; total, \$26; average, \$3.71; Germans, 3; total, \$10; average, \$3.33; Scotchman, 1; total, \$3.75. 5 keep an itemized account of their expenses, which is 8+per cent. 40 own sew-

ing machines, which is 83+per cent of those supporting families. 16 own musical instruments, which is 27-per cent. Number of musical instruments: Pianos, 2; organs, 10; violins, 3; guitar, 1. Number of employes who take newspapers and magazines, 42; Americans, 22; Germans, 7; Hollanders, 6; Canadians, 3; Scotchmen, 2; Swedes, 2. 70 per cent take newspapers and magazines, of which 52+per cent are Americans. Number of dailies taken, 38; scientific, 1; local and other weekly papers, 40; magazines 1. 28 work at hand and 27 at machine work and 5 at both. 10 carry life insurance amounting to \$17,000; average, \$1,700; Americans, 6; total, \$11,000; Germans, 2; total \$2,000; Hollander, 1; total, \$2,000; Swede, 1; total, \$2,000. 17-per cent are insured. 2 belong to benefit societies. 1 American and 1 German, \$5 each. 3+per cent belong to benefit societies.

GRAND HAVEN.

Forty-seven employes were canvassed: Dake Engine Manufacturing Co., 16; Henry Bloecker & Co. (manufacturers of stationary and marine engines), 31.

Nationality: Americans, 30; Germans, 8; Englishmen, 4; Swedes, 2; Canadian, 1; Polander, 1; Hollander, 1. 64-per cent are Americans and 36+per cent foreigners. Of the foreigners 47+per cent are Germans, 23+per cent Englishmen, 12-per cent Swedes; 6+per cent each, Canadians, Polanders and Hollanders. Parentage of those born in the United States: American, 16; German, 6; English, 5; Holland 2; Canadian, 1. 53+per cent have American and 47-per cent foreign parents. 27 are married, 18 single and 2 widowers. 58-per cent are married, 38+per cent single and 4+per cent widowers. 18 support self only; 29 support families: Americans, 14; Germans, 7; Englishmen, 3; Swedes, 2; Canadian, 1; Polander, 1; Hollander, 1. In 29 families there are 74 children, of whom 49 are supported. Eight married men have no children: 7 or 87+per cent are Americans and one a German. Of the children supported 19 are under 5 years of age; 30 are 5 and under 20. 24 attend school, which is 80 per cent of school age. All attend the public schools. Number of persons supported in families, 78. Two employes support 2 persons besides wife and children. Total number of weeks worked during the year, 2,372; average, 50.4+. 20 men or 42+per cent, lost 72 weeks, or 1 year and 20 weeks. Cause of lost time: Sickness, 17; sickness and laid off, 1; no work, 1; at school, 1. Total annual earnings, \$24,618.15; average, \$523.79. Total income from other resources, \$1,010, as follows: Family earnings, \$700; interest, \$210; rent, \$100. Total annual earnings of Americans, \$14,010.25; average, \$467; Germans, \$4,893.90; average, \$611.73; Englishmen, \$2,646; average, \$661.50; Swedes, \$1,092; average, \$546; Canadian, \$1,040; average, \$1,040; Polander, \$468; average, \$468; Hollander, \$468; average, \$468. Average weekly wages of married men, \$12.36; single men, \$7.01; all employes, \$10.31. Wages paid per week: Five employes \$3 each; one, \$4; one, \$4.50; one, \$5.25; two, \$6; one, \$7.50; eight, \$9; six, \$10.50; twelve, \$12; three, \$13.50; three, \$15; two, \$16.50; one, \$19.20; one, \$20.

Total family expenses, \$16,309; per capita, \$152.42; Americans, \$3,141; per capita, \$173.21; Germans, \$4,073; per capita, \$127.28; Englishmen, \$2,025; per capita, \$126.56; Swedes, \$920; per capita, \$131.43; Canadians, \$700; per capita, \$350; Hollanders, \$450; per capita, \$225. Number owning homes, 11: Americans, 4; Germans, 4; Swedes, 2; Canadian, 1. All home owners are married men. 41-per cent of married men own homes. 36+per cent of home owners are Americans and 64-per cent are foreigners. Total value of homes, \$8,200; average, \$745.45. Americans, \$3,300; average, \$825; Germans, \$2,800; average, \$700; Swedes, \$1,400; average, \$700; Canadian, \$700; average, \$700. The homes of two employes are mortgaged, which is 18+per cent. Value of mortgaged homes, \$1,600; mortgaged for \$700, which is 44-per cent of valuation. The home of one American is mortgaged for \$200 and one German for \$500. During the year three men made payments and improvements upon homes amounting to \$200, and 13 saved \$3,125 in money. Total number of employes who saved, 16, which is 34+per cent. Total savings, including payments and improvements upon homes, \$3,325, which is 13+per cent of total earnings. Total present worth of 36 employes (11 not reporting), \$34,675; average, \$963.19; Americans, 20; total, \$13,900; average, \$695; Germans, 7; total, \$13,000; average, \$1,857.14; Englishmen, 4; total, \$2,700; average, \$675; Swedes, 2; total, \$1,900; average, \$350; Canadians, 1; total, \$2,600; Polander, 1; total, \$275; Hollander, 1; total, \$300. One employe is worth \$8,000. Two Englishmen had \$210 upon arrival in this country. Total present worth of foreigners, \$20,775. Number renting homes, 17: Americans, 10; Germans, 3; Englishmen, 3; Hollander, 1. One widower rents. 63+per cent of married men and 36+per cent of total rent. Total monthly rent, \$113; average, \$6.65. Total annual rent, \$1,356; average, \$79.76. Per cent of rent to earnings, .13-. Per cent of rent to expenses, .13+. Total monthly rent of Americans, \$66; average, \$6.60; Germans, \$22; average, \$7.33; Englishmen, \$19; average, \$6.33; Hollander, \$6; average, \$6.

Number of employes boarding, 7, which is 15-per cent of total employes. 11 live at home and give wages to parents. Total weekly board, \$26; average, \$3.71; Americans, 5; total, \$17.50; average, \$3.50; Englishman, 1; total, \$5; Polanders, 1; total, \$3.50. Only one employe keeps an itemized account of his expenses, which is 2-per cent. 20 own sewing machines, which is 70-per cent of those supporting families. Nine own musical instruments, which is 19-per cent. Number of musical instruments: Piano, 1; organs, 8. Number of employes who take newspapers and magazines, 25: Americans, 15; Germans, 5; Englishmen, 3; Swede, 1; Canadian, 1. 53-per cent take newspapers and magazines, of which 60 per cent are Americans. Number of dailies taken, 22; local and other weekly papers, 17; magazines, 3. 10 work at hand and 17 at machine work and 20 at both. None carry life insurance or belong to benefit societies.

QUINCY.

Forty-five employes were canvassed, all in S. D. Kimbark's (manufacturer of carriages). Nationality: Americans, 41; German, 1; Canadian, 1; Englishmen, 2. 91-per cent are Americans and 9-per cent foreigners. Parentage of those born in the United States: American, 32; English, 2; Irish, 3; German, 3; French, 1. 78-per cent have American and 22-per cent foreign parents. 33 employes are married, 11 single and 1 widower. 73-per cent are married, 24-per cent are single and 2-per cent are widowers. 11 support self only; 1 supports others than self by boarding, and 33 support families: Americans, 29; Englishmen, 2; German, 1; Canadian, 1. In 33 families there are 57 children, of whom 55 are supported. 8 married men have no children; 7 Americans and 1 Englishman. Of the children supported 20 are under 5 years of age; 34 are 5 and under 20; and 1 over 20. 29 attend school, which is 85-per cent of school age. All attend the public schools. Number of persons supported in families, 90; by boarding, 1. 3 employes support three persons besides wife and children. Total number of weeks worked during the year, 2,010; average, 44.6+. 38 men or 84-per cent lost 330 weeks or 6 years and 18 weeks. Cause of lost time: Laid off, 12; vacation, 1; sickness and laid off, 2; no work, 8; sickness, 3; sickness and no work, 1; holidays, 6; laid off and vacation, 1; vacation and sickness, 2; worked for self, 1; sickness and accident, 1. Total annual earnings, \$18,161.70; average, \$403.59. Total income from other resources, \$978, as follows: Pensions, \$108; interest, \$250; rent, 20; other sources, \$600. Total annual earnings of Americans, \$16,306.70; average, \$397.72; Englishmen, \$676; average, \$338; German, \$663; average, \$663; Canadian, \$516; average, \$516. Average weekly wages of married men, \$9.83; single men, \$6.48; all employes, \$9.01. Wages paid per week: Five employes \$4.50 each; one, \$4.80; six \$6; one, \$7.32; four, \$7.50; two \$8; six, \$9; four, \$10; two, \$10.50; three, \$10.80; five, \$12; two, \$13; three, \$13.50; one, \$15.

Total family expenses, \$13,775; per capita, \$111.99; Americans, \$11,578; per capita, \$107.20; Englishmen, \$970; per capita, \$161.67; Germans, \$663; per capita, \$132.60; Canadians, \$564; per capita, \$141. Number owning homes, 9: Americans, 8; Englishman, 1. All are married men. 27-per cent of married men own homes. 89-per cent of home owners are Americans and 11-per cent are foreigners. Total value of homes \$6,650; average, \$738.88; Americans, \$6,050; average, \$756.25; Englishmen, \$600; average, \$600. The home of one employe, an Englishman is mortgaged. Value of home, \$600; mortgaged for \$200, which is 33-per cent of valuation. During the year 4 employes made payments and improvements upon homes amounting to \$712 and 10 saved \$1,075 in money. Total number who saved, 13, which is 29-per cent. Total savings, including payments and improvements upon homes, \$1,787, which is 9-per cent of total earnings.

Total present worth of 40 employes (5 not reporting), \$28,050; average, \$701.25; Americans, 36; total, \$22,850; average, \$634.72; Englishmen, 2; total, \$3,400; average, \$1,700; German, 1; total, \$900; Canadian, 1; total, \$1,000. 1 Englishman had \$50 upon arrival in this country. Total present worth of foreigners, \$5,200. Number renting homes, 23: Americans, 20; English, German and Canadian, 1 each. 3 have rent free. 69-per cent of married men rent and 51-per cent of total employes. Total monthly rent, \$137.50; average, \$5.98. Total annual rent, \$1,650; average, \$71.74. Per cent of rent to earnings, 16-. Per cent of rent to expenses, 16+. Total monthly rent of Americans, \$115; average, \$5.75; Englishman, \$8; average, \$8; German, \$8.50; average, \$8.50; Canadian, \$6; average \$6. Number of employes boarding, 10, which is 22-per cent of total. 1 lives at home and supports family. All boarders are Americans. Total weekly board, \$29.50; average, \$2.95. Only 1 employe keeps an itemized account of his expenses. 26 own sewing machines, which is 79-per cent of those supporting families. 11 own musical instruments, which is 24-per cent. Number of musical instruments: Pianos, 2; organs, 4; violins, 2; accordions, 2; bass viol, 1. Number who take news-

papers and magazines, 36: Americans, 33; Englishmen, 2; German, 1. 80 per cent take newspapers and magazines, of which 91+per cent are Americans. Number of dailies taken 15; story, 5; religious, 7; scientific, 1; local and other weekly papers, 34; magazines, 3.

Twenty-two work at hand and 17 at machine work and six at both.* 3 men or 7-per cent have been injured since engaged as employes. 4 carry life insurance, amounting to \$6,000, average, \$1,500. Americans, 2; total, \$4,000; Englishman, 1; total \$1,000; German, 1; total, \$1,000. 9-per cent of employes are insured. 1 American belongs to a benefit society, which pays \$3 per week.

HOWELL.

Forty-three employes were canvassed: W. Smith (manufacturer of staves, 7; J. M. Clark & Co. (manufacturers of hand cars, push cars, trucks and wagons), 12; Howell Manufacturing Co. (manufacturers of hubs, spokes, bent work and wagon material), 24.

Nationality: Americans, 37; Canadians, 3; German, Austrian, and English, 1 each. 86+per cent are Americans and 14-per cent foreigners. Percentage of those born in the United States: American, 33; German, 1; Englishmen, 2; Irishman, 1. 89+per cent have American and 11-per cent foreign parents. 35 are married and 8 single. 81+per are married and 19-per cent single. Eight support self only and 35 support families: Americans, 31; Canadians, 2; Austrian, 1; German, 1. In 35 families there are 62 children, all of whom are supported. 7 married men, all Americans, have no children. Of the children supported 17 are under 5 years of age; 44 are 5 and under 20, and 1 over 20. 36 attend school, which is 82-per cent. All attend the public schools. Number of persons supported in families, 100. Three employes support three persons besides wife and children. Total number of weeks worked during the year, 1,689; average, 39.2+. 41 men or 95+per cent lost 530 weeks, or 10 years and 10 weeks. Cause of lost time: Sickness, 1; no work, 12; accident, 1; accident and out of work, 1; sickness and laid off, 2; sickness and no work, 6; laid off, 16; vacation, 1; laid off and vacation, 1. Total annual earnings, \$13,435.95; average, \$312.46. Total annual income from other resources, \$1,590, as follows: Family earnings, \$640; boarding, \$104; pensions, \$48; interest, \$448; other sources, \$350. Total annual earnings of Americans, \$12,048.45; average, \$325.62; Canadians, \$741; average, \$247; German, \$195; average, \$195; Englishman, \$262.50; average, \$262.50; Austrian, \$189; average, \$189. Average weekly wages of married men, \$7.91; single men, \$7.87; all employes, \$7.90. Wages paid per week: One employe, \$3; one, \$4.50; two, \$5.40; five, \$6; seven, \$6.75; one, \$6.90; twelve, \$7.50; five, \$9; one, \$9.60; three, \$10.50; four, \$12; one, \$13.50.

Total family expenses, \$11,667; per capita, \$86.42; Americans, \$10,407; per capita, \$86.73; Canadians, \$746; per capita, \$106.57; Austrians, \$289; per capita, \$96.33; Germans, \$225; per capita, \$45. Number owning homes, 14: Americans, 13; German, 1. All home owners are married men. 40 per cent of married men own homes. 93-per cent of home owners are Americans and 7+per cent foreigners. Total value of homes, \$11,100; average, \$792.85; Americans, \$10,500; average, \$807.69; German, \$600; average, \$600. The homes of 7 employes are mortgaged, which is 50 per cent. Value of mortgaged homes, \$5,300; mortgaged for \$1,463, which is 27+per cent of valuation. The homes of 6 Americans are mortgaged for \$1,333; 1 German for \$130. During the year six employes made payments and improvements upon homes amounting to \$245, and seven men saved \$985 in money. Total number of employes, who saved, 11, which is 25+per cent. Total savings, including payments and improvements upon homes, \$1,230, which is 9+per cent of total earnings. Total present worth of 39 employes (4 not reporting), \$30,480; average, \$781.53. Americans, 33; total, \$24,105; average, \$730.45; Canadians, 3; total, \$5,300; average, \$1,766.66; German, 1; total, \$800; Austrian, 1; total, \$200; Englishman, 1; total, \$75. One Englishman had \$20 upon arrival in this country. Total present worth of foreigners, \$6,375. Number renting homes, 20: Americans, 17; Canadians, 2; Austrian, 1. One has rent free. 57+per cent of married men and 46+per cent of total employes rent. Total monthly rent, \$108.30; average, \$5.42. Total annual rent, \$1,299.60; average, \$64.98. Per cent of rent to earnings, 21+. Per cent of rent to expenses, 19+. Total monthly rent of Americans, \$93.75; average, \$5.51; Canadians, \$10.75; average, \$5.38; Austrian, \$4; average, \$4. Number of employes boarding, 7, which is 16-per cent of total. One lives at home and pays no stated amount for board. Total weekly board, \$22.50; average, \$3.21; Americans, 5; total, \$17; average, \$3.40; Canadian, 1; total, \$2.50; Englishman, 1; total, \$3. Ten employes keep an itemized account of their expenses, which is 23+per cent. Thirty own sewing machines, which is 86-per cent of those supporting families. Eighteen own musical instruments, which is 42-per cent. Number of musical instruments: Pianos, 2; organs, 12; violins, 2; melodeon, 1; tuba, 1; bass viol, 1.

Number of employes who take newspapers and magazines, 34: Americans, 29; Canadians, 3; German, 1; Austrian, 1. 79+per cent take newspapers and magazines, of which 85+per cent are Americans. Number of dailies taken, 19; story, 3; religious, 1; labor, 3; local and other weekly papers, 38.

Eighteen work at hand and 19 at machine work and 6 at both. Four men, or 9+per cent, have been injured since engaged as employes. Five reported that their labor organization had been of no financial benefit to them. Other than financially, four reported that their labor organization had been of benefit to them socially and educationally and one educationally.

Seven carry life insurance amounting to \$13,000; average, \$1,857.14; Americans, 5; total, \$9,500; Canadian, 1; total, \$1,000; German, 1; total, \$2,500. 16+per cent are insured. One Austrian belongs to a benefit society and receives \$3 per week.

TECUMSEH.

Thirty-eight employes were canvassed: J. R. Hiale (manufacturer of carriages and buggies), 6; H. Brewer & Co. (manufacturers of brick and tile machines and clay crushers), 32.

Nationality: Americans, 32; German, Holland, Canadian, Irish, Austrian and English, 1 each. 84+per cent are Americans and 16-per cent foreigners. Parentage of those born in the United States: American, 23; German, 1; Holland, 2; English, 1; Canadian, 1; Irish, 4. 72-per cent have American and 28+per cent foreign parents. 25 employes are married, 11 single and 2 widowers. 66-per cent are married, 29-per cent single and 5+per cent widowers. 10 support self only; 1 supports others than self by boarding, and 27 support families: Americans, 21; German, Holland, Canadian, English, Irish and Austrian 1 each. In 27 families there are 45 children, of whom 41 are supported. 8 married men have no children; 6, or 75 per cent, are Americans, 1 Austrian and 1 Englishman. Of the children supported 9 are under 5 years of age; 29 are 5 and under 20 and 3 are over 20. 24 attend school, which is 83-per cent of school age. 22 or 92-per cent attend the public schools and 2 select schools. Number of persons supported in families, 68; by boarding, 2. 3 employes support 4 persons besides wife and children. Total number of weeks worked during the year, 1,827; average, 48.0+; 27 men or 71+per cent lost 122 weeks or 2 years and 18 weeks. Cause of lost time: Sickness, 6; holidays, 4; accident, 1; no work, 6; vacation, 4; at school, 1; laid off, 3; laid off and sickness, 2. Total annual earnings, \$18,564.12; average, \$488.53. Total income from other resources, \$1,033, as follows: Pensions, \$228; rent, \$75; other sources, \$730. Total annual earnings of Americans, \$15,299.02; average, \$478.09; German, \$561.60; average, \$561.60; Hollander, \$702; average, \$702; Canadian, \$780; average, \$780; Englishman, \$414; average, \$414; Irishman, \$425; average, \$425; Austrian, \$382.50; average, \$382.50. Average weekly wages of married men, \$10.60; single men, \$8.78; all employes, \$10.07. Wages paid per week: Two employes \$3 each; one, \$6; seven, \$7.50; two, \$8.50; four, \$9; one, \$10; three, \$10.50; two, \$10.80; one, \$11.70; eight, \$12; one \$12.60; one, 12.90; four, \$13.50; one, \$15. Total family expenses, \$13,275; per capita, \$139.74; Americans, \$10.146; per capita, \$142.90; Germans, \$561; per capita, \$112.20; Hollanders, \$900; per capita, \$150; Irishmen, \$400; per capita, \$66.66; Canadians, \$730; per capita, \$243.33; Englishmen, \$214; per capita, \$107; Austrians, \$324; per capita \$162. Number owning homes, 16: Americans, 12; German, Hollander, Austrian, and Englishman, 1 each. 14 married men and 2 widowers own homes. 53+per cent of married men own homes. 75 per cent of home owners are Americans and 25 per cent foreigners. Total value of homes, \$19,950; average, \$1,246.87; Americans \$15,950; average, \$1,329.16; German, \$1,300; average, \$1,300; Hollander, \$1,400; average, \$1,400; Englishman, \$1,000; average, \$1,000; Austrian, \$300; average, \$300. The homes of 7 employes are mortgaged, which is 44-per cent. Value of mortgaged homes, \$7,750; mortgaged for \$2,805, which is 36+per cent of valuation. The homes of 5 Americans are mortgaged for \$2,530; 1 Austrian, \$75; 1 Hollander, \$200. During the year 6 employes made payments and improvements upon homes amounting to \$685, and 15 men saved \$1,745. Total number who saved, 20; which is 53-per cent. Total savings, including payments and improvements upon homes, \$2,430, which is 13+per cent of total earnings. Total present worth of 32 employes (6 not reporting) \$41,355; average, \$1,292.34; Americans, 26; total, \$30,955; average, \$1,190.57; German, 1; total, \$1,500; average, \$1,500, Hollander, 1; \$5,000 average, \$5,000; Irishman, 1; \$700; average \$700; Englishman, 1; \$2,000; average, \$2,000; Austrian, 1; \$600; average, \$600; Canadians, 1; \$300; average, \$300. 1 employe is worth \$5,000 and one \$7,000. Total present worth of foreigners, \$10,400. Number renting homes, 11; Americans, 9; Irishmen, 1; Canadian, 1. 1 has rent free. 44+per cent of married men rent and 29-per cent of total employes. Total monthly rent, \$69.40; average, \$6.31. Total annual rent, \$832.80;

average, \$75.71. Per cent of rent to earnings, .15+. Per cent of rent to expenses, .15+. Total monthly rent of Americans, \$49.90; average, \$5.54; Irishman, \$12.50; average, \$12.50; Canadian, \$7; average \$7. Number of employes boarding, 9; which is 24-per cent of total. 1 lives at home and gives wages to parents. Total weekly board, \$26.25; average, \$2.92. All boarders are Americans. 3 keep an itemized account of their expenses, which is 8-per cent. 24 own sewing machines, which is 89-per cent of those supporting families. 14 own musical instruments, which is 37-per cent. Number of musical instruments: Pianos, 4; organs, 6; violin, 1; guitar, 1; melodeon, 1; cornet, 1; organette, 1. Number of employes who take newspapers and magazines, 33; Americans, 27; German, Irish, Holland, Canadian, English and Austrian, 1 each. 87-per cent take newspapers, of which 82-per cent are Americans. Number of dailies taken, 26; story, 8; religious, 4; scientific, 3; local and other weekly papers, 42; magazines, 5.

Twenty-one work at hand and 10 at machine work and 7 at both. 2 men or 5+-per cent have been injured since engaged as employes. 1 reported that his labor organization had been of financial benefit to him and 4 no financial benefit. Other than financially, 1 reported that his labor organization had been of benefit to him socially and educationally and four no benefit. 8 carry life insurance amounting to \$23,000; average, \$2,875; Americans, 6; total, \$20,000; Hollander, 1; total, \$1,000; Englishman, 1; total, \$2,000. 21+-per cent of employes are insured. One American belongs to a benefit society; weekly benefit, \$2.50. 2+-per cent belong to benefit societies.

FERRYSBURG.

Thirty-five employes were canvassed: All in the employ of Johnston Bros. (manufacturers of boilers and plate iron work).

Nationality: Americans, 11; Hollanders, 7; Germans, 11; Canadians, 2; Polander, 1; Swedes, 2; Scotchman, 1. 31+-per cent are Americans and 69-per cent foreigners. Of the foreigners 29+-per cent are Hollanders; 46-per cent Germans; 8+-per cent Canadians; 8+-per cent Swedes; 4+-per cent Scotchmen and 4+-per cent Polanders. Percentage of those born in the United States: American, 2; German, 4; Canadian, 2; Scotch, Holland and English 1 each. 18+-per cent have American and 82+- foreign parents. 23 are married; 10 single and 2 widowers. 66-per cent are married, 29-per cent are single and 5+-per cent are widowers. 11 support self only; 24 support families: Americans, 7; Hollanders, 5; Germans, 7; Swedes, 2; Canadian, 1; Polander, 1; Scotchman, 1. In 24 families there are 104 children, of whom 54 are supported. One married man, an American, has no children. Of the children supported 8 are under 5 years of age, 46 are 5 and under 20 years of age. 36 attend school, which is 78+-per cent. 27 or 75 per cent attend the public schools and 9 parochial. Number of persons supported in families, 78. One employe supports 1 person besides wife and children. Total number of weeks worked during the year, 1,744; average, 49.8+. 21 employes or 60 per cent lost 76 weeks, or 1 year and 24 weeks. Cause of lost time: Sickness, 18; no work, 1; laid off, 2. Total annual earnings, \$20,410.50; average, \$583.15. Total income from other resources, \$480, all from boarding. Total annual earnings of Americans, \$7,201.50; average, \$654.68; Hollanders, \$3,171; average, \$453; Germans, \$6,552; average, \$595.63; Canadians, \$756; average, \$378; Polander, \$450; average, \$450; Swedes, \$1,500; average, \$750; Scotchman, \$780; average, \$780. Average weekly wages of married men, \$13.02; single men, \$8.25; all employes, \$11.65. Wages paid per week: Four employes, \$6 each; two, \$7.50; eight, \$9; one, \$10.50; two, \$12; five, \$13.50; thirteen, \$15.

Total family expenses, \$14,713; per capita, \$144.25; Americans, \$4,705; per capita, \$196.04; Hollanders, \$2,630; per capita, \$119.54; Germans, \$4,406; per capita, \$125.94; Canadians, \$490; per capita, \$115; Polanders, \$450; per capita, \$225; Swedes, \$1,360; per capita, \$123.64; Scotchmen, \$700; per capita, \$175. Number owning homes, 12: Americans, 5; Hollanders, 2; Germans, 3; Swede, 1; Scotchman, 1. All home owners are married men. 52+-per cent of married men own homes. 42-per cent of home owners are Americans and 58+-per cent foreigners. Total value of homes, \$9,000; average, \$750; Americans, \$3,800; average, \$760; Germans, \$2,100; average, \$700; Hollanders, \$1,400; average, \$700; Swede, \$800; average, \$800; Scotchman, \$900; average, \$900. The homes of two employes are mortgaged, which is 16+-per cent. Value of mortgaged homes, \$1,500; mortgaged for \$500, which is 33+-per cent of valuation. The homes of one American is mortgaged for \$300 and one German for \$200. During the year 11 employes made payments and improvements upon homes amounting to \$970, and 10 men saved \$1,355. Total number of employes who saved, 20; which is 57+-per cent. Total savings, including payments and improvements upon homes, \$2,325, which is 11+-per cent of total earnings. Total present worth of 31 employes (4 not reporting), \$24,645; average, \$795. Americans, 9;

total, \$7,450; average, \$827.77; Hollanders, 6; total, \$4,050; average, \$675; Germans, 10; total, \$7,525; average, \$752.50; Canadians, 2; total, \$810; average, \$405; Polander, 1; total, \$560; Swedes, 2; total, \$2,050; average, \$1,025; Scotchman, 1; total, \$2,200. Five Hollanders had \$300 upon arrival in this country; 3 Germans, \$395; 1 Canadian, \$100; 1 Polander, \$50; 2 Swedes, \$150; 1 Scotchman, \$100. Total present worth of foreigners, \$17,195. Number renting homes, 12; Americans, 2; Hollanders, 3; Germans, 4; Canadian, 1; Polander, 1; Swede, 1. One widower rents. 47+per cent of married men rent and 34+per cent of total employes. Total monthly rent, \$92; average, \$7.68. Total annual rent, \$1,104; average, \$92. Per cent of rent to earnings, 16-; per cent of rent to expenses, 16+. Total monthly rent of Americans, \$15; average, \$7.50; Hollanders, \$24; average, \$8; Germans, \$31; average, \$7.75; Canadian, \$7; average, \$7; Polander, \$7; average, \$7; Swede, \$8; average, \$8.

Number of employes boarding, 10, which is 28+per cent of total. One lives at home and gives wages to parents. Total weekly board, \$35.50; average, \$3.55. Americans, 4; total, \$14; average, \$3.50; Hollander, 1; total, \$3; Germans, 4; total, \$15; average, \$3.75; Canadian, 1; total, \$3.50. None keep an itemized account of their expenses. 20 own sewing machines, which is 83+per cent of those supporting families. Three own musical instruments, which is 8+per cent. Number of musical instruments: Organs, 2; violins, 1. Number of employes who take newspapers and magazines, 24; Americans, 9; Hollanders, 5; Germans, 7; Swedes, 2; Scotchman, 1. 68+per cent take newspapers and magazines, of which 37+per cent are Americans. Number taking dailies, 12; weeklies, 15.

Thirty-two work at hand work and 3 at both hand and machine work. Four reported that their labor organization had been of financial benefit to them; 5 no financial benefit. Other than financially, nine reported they had received no benefit. None carry life insurance. Seven belong to benefit societies; Americans, 2; total, \$10; average, \$5; Hollanders, 2; total, \$10; average, \$5; Germans, 2; total, \$10; average, \$5; Scotchman, 1; total, \$5. Total weekly benefit, \$35; average, \$5. 20+per cent belong to benefit societies.

MARSHALL.

Thirty employes were canvassed, all in Page Bros. (manufacturers of buggies and carriages).

Nationality: Americans, 27; Canadians, 2; Scotchman, 1. 90 per cent are Americans and 10 per cent foreigners. Parentage of those born in the United States: American, 21; German, 4; Irish, 2. 78+per cent have American and 22+per cent foreign parents. 15 employes are married and 15 single. 50 per cent are married and 50 per cent single. 14 support self only, and 16 support families: American, 15; Scotchman, 1. In 16 families there are 22 children, of whom 21 are supported. Six married men, all Americans, have no children. Of the children supported 7 are under 5 years of age; 13 are 5 and under 20, and 1 is over 20. Nine attend school, which is 69+per cent of school age. All attend the public schools. Number of persons supported in families, 38. Two employes support 2 persons besides wife and children. Total number of weeks worked during the year, 1,171; average 39+. 29 men or 97+per cent lost 389 weeks or 7 years and 25 weeks. Cause of lost time: Laid off, 6; vacation, 2; sickness and laid off, 6; no work, 6; sickness, 3; sickness and no work, 2; accident, 3; accident and laid off, 1. Total annual earnings, \$10,541; average, \$351.36. Total income from all other resources, \$120, for interest. Total annual earnings of Americans, \$9,795; average, \$362.77; Canadians, \$434; average, \$217; Scotchman, \$312; average, \$312. Average weekly wages of married men, \$10.43; single men, \$7.60; all employes, \$9.01. Wages paid per week: One employe, \$2; one, \$2.50; one, \$3; one, \$5; three, \$6; five, \$7.50; one, \$8; four, \$9; one, \$10; three, \$10.50; seven, \$12; one, \$15; one, \$18.

Total family expenses, \$5,999; per capita, \$111.09; Americans, \$5,687; per capita, \$113.74; Scotchmen, \$312; per capita, \$78. Number owning homes, 2 Americans, both married. 13+per cent of married men own homes. Total value of homes, \$1,600; average, \$800. The home of one employe, valued at \$800, is mortgaged for \$500, which is 62+per cent of valuation. Eight employes saved \$750 during the year, which is 27+per cent of employes, and 7+per cent of total earnings. Total present worth of 23 employes (7 not reporting), \$14,610; average, \$635.21; Americans, 21; total, \$13,310; average, \$633.80; Canadian, 1; total, \$500; Scotchman, 1; total, \$800. Total present worth of foreigners, \$1,300. Number renting homes, 13: Americans, 12; Canadian, 1. 86+per cent of married men rent and 43+per cent of total. Total monthly rent, \$77.75; average, \$5.98. Total annual rent, \$933; average, \$71.77. Per cent of rent to earnings, 17+. Per cent of rent to expenses, 18+. Total monthly rent of Americans, \$71.75; average, \$5.98; Canadian, \$6; average, \$6.

Number of employes boarding, 9, which is 30 per cent. One lives at home and gives wages to parents; one lives at home and pays no stated amount for board. Total weekly board, \$29.50; average, \$3.28. Americans, 8; total, \$26; average, \$3.25; Canadian, 1; total, \$3.50. Five keep an itemized account of their expenses, which is 17-per cent. 11 own sewing machines, which is 69-per cent of those supporting families. Seven own musical instruments, which is 23+per cent. Number of musical instruments: Organs, 4; violin, 1; banjo, 1; horn, 1.

Number of employes who take newspapers and magazines, 19: Americans, 18; Scotchman, 1. 63+per cent take newspapers. Number of dailies taken, 13; story, 4; labor, 1; scientific, 1; local and other weeklies, 14.

Seventeen work at hand and 11 at machine work and 2 at both. Four men or 13+per cent have been injured since engaged as employes. Five carry life insurance amounting to \$8,828; average, \$1,765.60; Americans, 4; total, \$5,828; Canadian, 1; total, \$3,000. 17-per cent are insured. Two belong to benefit societies: One American, total, \$5; one Canadian, total, \$15. 7-per cent belong to benefit societies. Total weekly benefit, \$20; average, \$10.

JONESVILLE.

Twenty-seven employes were canvassed: Chas. Allen, (cooperage) 7; J. J. Deal, (manufacturer of carriages and wagons) 20.

Nationality: Americans, 24; Canadians, 2; Hollander, 1. 89-per cent are Americans and 11+per cent foreigners. Parentage of those born in the United States: Americans, 19; German, 3; Irish, 1; Scotch, 1. 79+per cent have American and 21-per cent foreign parents. 15 employes are married, 10 single and 2 widowers. 11 support self only, 1 supports others than self by boarding and 15 support families; Americans, 14; Hollander, 1. In 15 families there are 26 children; all supported. 6 married men have no children. 5 are Americans and 1 Canadian. Of the children supported 11 are under 5 years of age, 14 are 5 years and under 20, and 1 is over 20. 11 attend school, which is 79-per cent of school age. All attend the public schools. Number of persons supported in families, 43; by boarding, 2. 4 employes support 4 persons besides wife and children. Total number of weeks worked during the year, 1,238; average, 45.8+. 21 men, or 78-per cent lost 166 weeks or 3 years and 10 weeks. Cause of lost time: No work, 7; laid off, 5; sickness, 2; sickness and laid off, 3; holidays, 3; laid off and vacation, 1. Total annual earnings, \$10,863.70; average, \$402.86. Total income from other resources, \$358, as follows: Pensions, \$48; other sources, \$310. Total annual earnings of Americans, \$9,576.20; average, \$399.01; Canadians, \$958.50; average, \$479.25; Hollander, \$329; average \$329. Average weekly wages of married men, \$9.83; single men, \$6.77; all employes, \$8.69. Wages paid per week: One employe, \$3.25; one, \$4.50; two, \$6; one, \$6.50; three, \$7; two, \$7.50; five, \$8; one, \$8.10; six, \$9; two, \$12; two, \$15; one, \$16.50.

Total family expenses, \$5,957; per capita, \$102.70. Americans, \$5,628; per capita, \$104.22; Hollanders, \$329; per capita, \$82.25. Number owning homes, 5; all Americans; all are married men. 33+per cent of married men own homes. Total value of homes, \$2,600; average, \$520. The home of one employe an American, is mortgaged. Value of home, \$500; mortgaged for, \$200, which is 40 per cent of valuation. During the year 2 employes made payments and improvements upon homes amounting to \$100, and 7 men saved \$685 in money. Total number of employes who saved, 7; which is 26-per cent. Total savings, including payments and improvements upon homes, \$785, which is 7+per cent of total earnings. Total present worth of 24 employes (3 not reporting), \$11,260; average, \$469.16; Americans, 22; total, \$10,410; average, \$473.18; Canadians, 1; total, \$150; Hollander, 1; total, \$700. 1 Hollander had \$100 upon arrival in this country. Total present worth of foreigners, \$850. Number renting homes, 9; all Americans. 1 has rent free. 60+per cent of married men rent, and 33+per cent of total employes. Total monthly rent, \$51.40; average, \$5.71. Total annual rent, \$616.80; average, \$68.53. Per cent of rent to earnings, .17+. Per cent of rent to expenses, .18+.

Number of employes boarding, 13, which is 48+per cent of total. 1 lives at home and gives wages to parents. Total weekly board, \$38.50; average, \$2.96; Americans, 11, total, \$31.50 average, \$2.86; Canadians, 2; total, \$7; average, \$3.50. 3 employes keep an itemized account of their expenses, which is 11+per cent. 14 own sewing machines, which is 93+per cent of those supporting families. 9 own musical instruments, which is 33+per cent. Number of musical instruments: Organs, 6; horns, 2; guitar, 1. Number of employes who take newspapers and magazines, 21; Americans, 19; Hollander, 1; Canadian, 1. 78-per cent take newspapers and magazines, of which 90+per cent are Americans. Number of dailies taken, 20; religious, 2 scientific, 4; local and other weekly papers, 15; magazines, 3; miscellaneous, 2.

Nineteen work at hand and 4 at machine work and 4 at both. 5 employes, all Americans, carry life insurance, amounting to \$9,000; average, \$1,800. 18+per cent are insured. None belong to benefit societies.

BUCHANAN.

Twenty-six employes were canvassed: Industrial Manufacturing Co. (manufacturers of wind mills, wooden tanks and oil cans), 5; Rough Bros. Wagon Works (manufacturers of wagons and sleds), 21.

All employes are Americans. Parentage of those born in the United States: American, 23; English, 2; German, 1. 21 employes are married, 4 single and 1 a widower. 81-per cent are married, 15+per cent single and 3+per cent widowers. Two support self only; one supports others than self by boarding and 23 support families. In 23 families there are 29 children, of whom 27 are supported. Four married men have no children. Of the children supported 7 are under 5 years of age, 20 are 5 and under 20. 19 attend school, which is 96 per cent of school age. 18 attend the public schools and one a commercial college. Number of persons supported in families, 52; by boarding, 1. Five employes support 5 persons besides wife and children. Total number of weeks worked during the year: 1,191; average, 45.8+. 25 men or 96+per cent lost 161 weeks, or 3 years and 5 weeks. Cause of lost time: Vacation, 1; holidays, 9; no work, 7; laid off, 3; sickness and laid off; 2; laid off and vacation 1; no work and vacation, 1; holidays and vacation, 1. Total annual earnings, \$10,923.06; average, \$420.11. Total income from other resources, \$233, as follows: Family earnings, \$75; pensions, \$72; interest, \$50; rent, \$30; other sources, \$6. Average weekly wages of married men, \$9.55; single men, \$7.37; all employes, \$9.21. Wages paid per week: One employe, \$6; one, \$6.30; one, \$6.76; three, \$7; one, \$7.50; four, \$8; four, \$9; four, \$10; four, \$10.50; two, \$12; one, \$18.

Total family expenses, \$8,535; per capita, \$113.80. Number owning homes, 11, all of whom are married. 53+per cent of married men own homes. Total value of homes, \$10,430; average, \$948.18. The homes of three employes are mortgaged, which is 27+per cent. Value of mortgaged homes, \$3,550; mortgaged for \$318, which is 9-per cent of valuation. During the year 10 employes made payments and improvements upon homes amounting to \$870 and 9 saved \$756 in money. Total number of employes who saved, 16; which is 61+per cent. Total savings, including payments and improvements upon homes, \$1,626, which is 15-per cent of total earnings. Total present worth of 25 employes (one not reporting), \$21,715; average, \$868.60. Number renting homes, 10. One renter is a single man and one has rent free. 43-per cent of married man and 38+per cent of total employes rent. Total monthly rent, \$49; average, \$4.90. Total annual rent, \$588; average, \$58.80. Per cent of rent to earnings, .14+; per cent of rent to expenses, .15-.

Number of employes boarding, two, who pay \$3.50 per week, each. One lives at home and supports family and one lives at home and pays no stated amount for board. 20 own sewing machines, which is 87-per cent of those supporting families. Nine own musical instruments, which is 35-per cent. Number of musical instruments: Organs, 8; violin, 1. Number of employes who take newspapers and magazines, 22, which is 85-per cent. Number of dailies taken, 11; story, 3; religious, 4; local and other weekly papers, 24; magazines, 4.

Eleven work at hand and nine at machine work and six at both. Two reported that their labor organization had been of no financial benefit to them. Other than financially, one reported that his labor organization had been of benefit socially and one reported no benefit. Four carry life insurance, amounting to \$9,000; average, \$2,250. 15+per cent are insured. None belong to benefit societies.

TOTALS
BY
TOWNS AND NATIONALITIES
OF
TABLES NOS. 1 TO 13 INCLUSIVE.

TABLE No. 14.—Showing Total Censuses by Towns and Cities of Tables Nos. 1 to 13, Inclusive.

Location.	Number Canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Families.						Income and Expenses.				Total years in U. S. of foreign born amount of money on arrival in U. S.		
				Number supporting families.	Number of children in families.	Number of children of school age.	Number attending school.	Number of persons supported in families.	Number of persons supported by boarding, etc.	Annual earnings.	Income from other sources.	Total annual income.	Total family expenses.		Family expenses per capita.	
Ann Arbor.....	91	34	1	56	99	74	57	160	1	\$34,390 00	\$3,713	\$38,073 00	\$23,974	\$110 98	444	\$241
Aubion.....	197	59	5	133	227	162	107	372	7	84,499 81	3,093	87,492 81	53,663	104 29	728	685
Adrian.....	76	24	1	60	97	63	44	153	2	50,491 30	1,619	32,110 30	23,663	109 80	908	700
Bay City.....	970	151	5	714	471	326	259	692	6	212,030 23	5,075	217,035 23	134,109	143 02	2,479	18,115
Battle Creek.....	793	137	21	586	887	599	436	1,542	27	383,769 09	13,179	411,068 09	270,756	127 29	2,527	4,880
Caldwater.....	179	79	8	97	163	100	71	268	6	60,830 30	2,453	63,303 30	38,900	98 60	391	185
Dowagiac.....	178	50	3	125	169	107	58	314	4	90,153 26	2,055	101,638 26	59,798	126 21	452	920
Detroit.....	3,922	1,664	216	2,648	4,273	2,418	1,171	6,665	823	1,901,291 45	86,969	1,988,250 45	1,068,716	122 65	24,133	109,878
Ferryburg.....	86	11	1	64	94	46	36	78	7	40,015 50	1,436	40,860 50	14,718	144 24	1,085	1,168
Grand Rapids.....	776	307	7	462	669	663	549	1,436	7	417,689 12	15,689	433,068 12	243,001	130 73	5,249	11,868
Grand Haven.....	47	18	1	29	49	30	24	78	—	24,618 15	1,010	25,628 15	16,309	152 44	226	210
Howell.....	43	8	—	35	62	44	36	107	—	13,485 36	1,860	15,345 36	11,667	86 42	86	20
Jackson.....	921	109	20	192	271	162	132	497	26	148,869 66	9,190	157,059 66	92,787	134 67	864	2,176
Jonesville.....	27	11	—	15	26	14	11	43	—	10,363 70	387	11,751 70	5,867	102 70	10	100
Kalamazoo.....	615	238	26	331	544	336	232	892	85	241,519 10	10,074	251,593 10	135,680	110 94	2,400	6,667
Lansing.....	538	177	12	349	664	415	268	1,031	19	218,530 81	12,264	230,794 81	137,514	97 13	1,866	10,994
Brochanan.....	26	2	1	23	27	20	19	52	1	10,923 06	236	11,159 06	8,635	113 06	—	—
Marshall.....	30	14	—	16	21	13	9	36	—	10,541 00	130	10,671 00	6,999	111 00	48	—
Montague.....	60	12	—	48	118	69	74	165	—	37,669 00	801	38,500 00	28,177	136 98	538	960
Muskegon.....	143	41	1	101	238	206	168	393	1	93,466 75	2,947	96,408 75	66,327	143 25	644	4,970
Plymouth.....	88	37	2	49	66	89	28	120	3	38,664 26	1,890	40,554 26	18,952	112 14	96	1,900
Quincy.....	46	11	1	33	55	34	23	120	—	13,161 00	1,890	15,051 00	13,775	111 69	109	660
Saginaw.....	64	29	—	35	77	45	35	113	—	36,450 73	1,549	38,000 73	36,450	150 73	366	—
Ann Arbor.....	186	10	1	171	241	146	106	346	2	18,524 12	1,083	19,607 12	13,279	139 73	130	400
Three Rivers.....	139	30	—	109	184	106	86	256	—	57,684 66	2,346	60,030 66	45,196	110 47	130	—
Grand total.....	8,833	3,826	337	5,196	9,806	6,134	4,249	15,636	908	\$4,127,591 20	\$154,921	\$4,282,512 20	\$2,060,521	\$122 47+	44,760	\$176,864

TABLE No. 14.—CONTINUED. —Showing Total Canvases.

Location.	Homes and savings.						Rent and Board.				Life Insurance.				
	Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.
Ann Arbor.....	27	\$29,775	16	\$7,400	\$2,785	\$59,390	26	\$5 75	20	\$3 05	72	18	\$21,115	14	\$4 00
Albion.....	75	101,025	53	21,510	8,010	142,970	54	6 92	46	3 02	135	59	114,500	21	3 79
Adrian.....	29	30,550	12	3,187	2,520	62,350	20	4 88	21	2 87	55	16	14,445	16	4 00
Bay City.....	102	115,900	45	14,100	18,815	285,370	110	7 58	130	3 58	197	93	178,450	48	6 77
Battle Creek.....	299	416,640	191	89,585	39,228	743,690	278	7 56	189	3 27	634	408	526,850	285	6 41
Coldwater.....	38	37,200	24	7,080	4,585	86,245	54	6 42	68	2 88	109	21	31,448	7	4 00
Dowagiac.....	62	69,750	41	19,295	11,740	137,570	56	6 31	48	3 41	141	87	104,335	66	7 65
Detroit.....	747	1,174,620	476	290,915	111,101	2,318,092	1,164	7 76	1,189	8 74	2,638	856	1,376,386	1,117	6 55
Ferrysburg.....	12	9,000	2	500	1,385	24,645	12	7 67	10	3 55	24	12	267,700	7	5 00
Grand Rapids.....	283	374,910	100	39,710	43,900	832,745	174	7 11	221	3 68	445	157	297,700	195	6 96
Grand Haven.....	11	8,200	2	700	3,125	34,675	17	6 65	7	3 71	25	7	13,000	1	3 00
Howell.....	14	11,100	7	1,463	985	30,480	20	5 42	7	3 21	34	7	118,375	210	6 62
Jackson.....	81	113,930	45	20,465	13,523	193,000	107	8 00	101	3 68	249	71	9,000	69	5 38
Jonesville.....	5	2,600	1	200	885	11,290	9	5 71	13	2 96	21	5	106,350	118	6 60
Kalamazoo.....	135	156,410	95	41,672	19,834	324,405	176	7 68	223	3 37	353	92	180,221	118	6 60
LaSalle.....	190	186,500	135	58,626	19,626	345,342	151	7 49	161	3 39	381	118	180,221	118	6 60
Lebanon.....	11	10,430	3	318	756	21,715	10	4 90	2	3 20	22	4	8,828	2	10 00
Marshall.....	2	1,690	1	500	750	14,610	13	5 98	9	3 58	19	5	8,828	2	10 00
Montague.....	26	21,550	11	2,100	2,350	57,580	22	7 00	11	3 61	42	10	17,000	2	5 00
Muskegon.....	54	62,700	17	3,556	10,210	157,580	47	8 87	85	3 69	108	34	60,000	29	5 00
Plymouth.....	15	15,800	5	1,950	4,700	50,915	29	5 14	31	3 03	52	4	6,000	14	4 43
Quincy.....	9	6,550	1	300	1,075	28,050	23	5 98	10	2 95	35	4	6,000	1	3 00
Saginaw.....	19	22,650	13	3,300	1,775	46,010	15	5 63	21	3 71	35	16	28,700	1	5 00
Tecumseh.....	16	19,950	7	2,805	1,745	41,355	11	6 31	9	2 92	33	8	23,000	1	2 50
Three Rivers.....	68	56,475	39	13,053	4,762	104,630	36	5 80	22	2 89	109	23	25,400	9	8 47
Grand total.....	2,328	\$3,055,965	1,342	\$614,455	\$399,880	\$6,154,774	2,634	\$7 43 +	2,604	\$3 55 +	5,949	2,116	\$3,150,313	2,243	\$6 41

TABLE No. 15.—*Showing by Towns and Cities the Number Canvassed, Number of Foreign Parents, Number of Weeks Employed, Average Number of Weeks of Age and Over and Those*

Name of Town.	19 Years of Age and Over.								
	Number canvassed.	Number born in U. S.	Number born of American parents.	Number born in U. S. of foreign parents.	Number foreign born.	Total number of weeks employed.	Average number of weeks employed.	Total annual earnings.	Average annual earnings.
Ann Arbor.....	76	50	36	14	26	3,280	43.1+	\$31,437 20	\$413 65
Albion.....	176	115	95	20	61	7,807	44.3+	79,697 11	452 52
Adrian.....	70	56	41	15	14	3,185	44.7+	29,391 70	419 98
Bay City.....	394	160	86	74	174	16,602	49.7+	202,192 06	605 27
Battle Creek.....	751	613	492	121	138	34,665	46.1+	382,942 49	509 21
Buchanan.....	25	25	22	3	3	1,142	45.6+	10,580 06	423 20
Coldwater.....	150	130	113	17	20	6,355	42.3+	55,061 73	371 06
Dowagiac.....	168	139	120	19	29	7,899	46.8+	96,362 76	573 59
Detroit.....	3,213	1,245	401	844	1,968	146,937	45.7+	1,658,899 71	516 30
Ferrysburg.....	38	10	2	8	23	1,642	49.7+	19,798 50	509 95
Grand Rapids.....	688	345	246	99	338	33,935	49.6+	395,638 72	579 27
Grand Haven.....	89	28	13	10	16	1,984	50.8+	22,763 65	533 73
Howell.....	42	36	32	4	6	1,663	39.5+	13,357 95	318 06
Jackson.....	287	210	140	70	77	12,717	44.3+	140,277 55	468 77
Jonesville.....	26	23	18	5	3	1,195	45.9+	10,605 70	407 91
Kalamazoo.....	519	363	223	140	156	23,361	45.0+	223,143 20	429 95
Lansing.....	481	303	230	73	178	20,894	43.4+	205,581 87	427 41
Marshall.....	26	24	19	5	2	1,011	38.8+	9,949 00	382 85
Montague.....	57	25	12	13	32	2,828	49.6+	36,745 00	644 65
Muskegon.....	139	76	38	38	63	6,968	49.8+	92,512 75	685 56
Plymouth.....	82	75	60	15	7	3,739	45.5+	32,326 70	394 23
Quincy.....	40	36	28	8	4	1,792	44.8+	17,165 70	429 14
Saginaw.....	56	32	20	12	24	2,818	50.3+	32,815 00	585 98
Tecumseh.....	35	29	20	9	6	1,701	48.6+	17,336 12	509 57
Three Rivers.....	128	122	114	8	6	5,888	46.	55,541 55	433 92
Total.....	7,636	4,265	2,621	1,644	3,371	351,888	46.0+	\$3,873,214 83	\$507 23

Native and Foreign Born, Number Born of American Parents, Number Born in U. S. Employed, Total Annual and Average Annual Earnings, of Those 19 Years Under 19 Years of Age.

Name of Town.	Under 19 Years of Age.								
	Number canvassed.	Number born in U. S.	Number born of American parents.	Number born in U. S. of foreign parents.	Number foreign born.	Total number of weeks employed.	Average number of weeks employed.	Total annual earnings.	Average annual earnings.
Ann Arbor.....	15	15	5	10	.....	638	42.2	\$2,923 80	\$194 88
Albion.....	21	13	9	4	8	846	40.2+	4,802 70	228 70
Adrian.....	5	5	2	3	.....	215	43.0	1,099 50	219 90
Bay City.....	26	27	8	19	9	1,785	49.5+	9,328 20	273 00
Battle Creek.....	42	30	29	10	3	1,887	44.9+	10,816 60	257 58
Buchanan.....	1	1	1	.....	.....	49	49.0	343 00	343 00
Coldwater.....	29	27	19	8	2	1,075	37.0+	5,158 55	177 88
Dowagiac.....	10	10	10	.....	.....	884	38.4	3,220 50	322 05
Detroit.....	707	438	99	339	269	31,080	43.9+	142,401 74	201 41
Ferrysburg.....	2	1	.....	1	1	102	51.0	612 00	306 00
Grand Rapids.....	93	71	39	32	23	4,533	48.7+	22,080 40	237 20
Grand Haven.....	8	7	3	4	1	383	48.5+	1,852 50	231 56
Howell.....	1	1	1	.....	.....	26	26.0	78 00	78 00
Jackson.....	34	30	13	17	4	1,469	43.2+	8,122 10	238 88
Jonesville.....	1	1	1	.....	.....	43	43.0	258 00	258 00
Kalamazoo.....	96	71	39	32	25	3,980	41.2+	18,475 90	192 45
Lansing.....	57	32	21	11	25	2,308	40.4+	12,938 94	226 98
Marshall.....	4	3	2	1	1	160	40.0	592 00	148 00
Montague.....	3	2	.....	2	1	137	45.6+	954 00	318 00
Muskegon.....	4	3	1	2	1	170	42.5+	944 00	236 00
Plymouth.....	6	5	5	.....	1	244	40.6+	1,329 35	221 60
Quincy.....	5	5	4	1	.....	215	43.6+	996 00	199 20
Saginaw.....	8	6	3	3	2	405	50.6+	1,747 00	218 37
Tecumseh.....	3	3	3	.....	.....	126	42.0	729 00	243 00
Three Rivers.....	11	10	9	1	1	459	41.7+	2,098 30	190 80
Total.....	1,202	826	326	500	376	52,682	43.9+	\$254,376 38	\$211 62

TABLE No. 16.—Showing Totals of Nation Canvassed by Towns and Cities, of Tables Nos. 1 to 13, Inclusive.

Nationality.	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	amilies.						Income and Expenses.				Average years in U. S. of foreign-borne 21 years of age, and over.	
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Number of persons supported by boarding, etc.	Annual earnings.	Income from other sources.	Total annual income.	Total family expenses.		Family expenses per capita.
DENMARK.															
United States.....	1,683	932	111	640	980	529	342	1,751	197	\$788,500 62	\$20,801	\$799,301 62	\$359,227	\$150 24	13
Germany.....	1,158	364	57	757	1,790	945	511	2,671	57	486,774 27	26,979	522,753 27	384,196	108 03	13
Canada.....	389	170	26	253	412	248	154	686	41	194,994 08	8,696	203,690 08	111,917	130 28	14
England.....	153	89	7	107	290	151	104	345	10	87,659 98	4,875	92,534 98	63,924	141 43	14
Ireland.....	182	90	11	121	347	229	136	484	16	96,686 18	13,451	109,467 18	71,685	118 49	20
SCOTLAND.															
Scotland.....	73	22	8	43	100	77	49	149	8	43,783 60	5,068	48,850 60	39,033	151 21	14
Poland.....	141	40	4	97	230	183	60	384	6	51,217 38	3,406	54,623 38	37,872	87 87	8
France.....	225	2	2	18	36	26	14	67	2	13,430 30	245	13,675 30	11,226	132 07	19
Switzerland.....	20	10	1	9	12	9	8	20	1	8,799 50	253	9,054 50	6,185	177 76	14
Holland.....	20	4	1	15	34	17	10	60	4	9,164 00	550	9,714 00	7,168	110 28	13
Belgium.															
Belgium.....	19	4	1	14	29	16	10	49	1	7,989 80		7,989 80	6,162	97 81	14
Austria.....	12	4	2	5	12	8	6	17	5	5,453 50	2,000	7,453 50	2,654	120 64	11
Russia.....	6	1	2	3	4	4	1	7	2	1,994 50		1,994 50	1,306	180 90	2
Denmark.....	8	3	1	5	16	9	5	21		3,785 00		3,785 00	2,396	89 88	10
Italy.....	4	1	1	2	8	6	5	10	1	1,491 80		1,491 80	773	64 83	4
West Indies.															
West Indies.....	1	1	1							186 00		186 00			
Norway.															
Norway.....	8	3	1	4	8	4	2	18	1	3,241 50		3,241 50	1,947	108 65	14
Australia.....	2	1		1	1	1		2		1,688 00	150	1,768 00	760	253 53	7
Bohemia.....	2			2	2	1		5		989 00		989 00	825	117 86	7
Sweden.....	5	3		3	12	9	7	14		3,510 00	484	3,994 00	1,650	108 13	10
Alaska.....	1	1	1							634 00		634 00			3
Albania.....	1	1								121 00		121 00			
Total.	3,920	1,656	216	2,046	4,278	2,418	1,417	6,665	823	\$1,901,301 45	\$84,969	\$1,986,260 45	\$1,068,716	\$123 66	

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TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Censused.

Nationality.	If foreign born, amount of money on arrival in United States.	Homes and Savings.					Rent and Board.				Life Insurance.					
		Number owning homes.	Total value of homes.	Number having indented-nees on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.
DETROIT.																
United States.	838,572	155	\$298,750	89	\$57,670	\$55,430	\$52,272	428	\$6 81	648	\$3 88	1,263	807	\$526,320	864	\$7 84
Germany	28,051	875	453,785	262	131,445	21,733	654,975	393	5 66	218	3 44	508	270	286,061	414	6 14
Canada	27,095	46	86,800	85	26,300	13,072	229,765	144	9 51	141	3 72	316	53	148,537	110	7 12
England	4,917	52	56,200	12	8,245	3,925	113,045	71	9 80	96	4 18	183	47	88,338	56	6 27
Ireland			106,400	20	10,760	9,292	218,965	61	8 81	54	3 90	186	59	119,945	54	5 53
Scotland	6,242	21	56,400	12	5,680	3,270	101,775	21	9 83	27	3 98	65	32	53,000	28	6 46
Poland	4,823	39	37,350	29	11,480	1,486	51,890	53	3 91	20	3 10	44	22	10,000	48	4 65
France	2,210	6	12,000	3	1,700	375	10,830	4	10 80	9	3 62	20	9	12,900	7	6 86
Switzerland	350	8	5,000	1	800	400	10,375	5	8 65	10	3 65	13	7	8,725	9	6 00
Holland	188	8	4,800	3	1,100	550	8,640	11	7 00	2	4 75	13	8	2,310	5	4 60
Belgium	1,235	7	18,600	3	1,900	550	17,515	6	6 58	3	3 67	9	4	7,225	1	15 00
Austria	210	2	2,900	2	1,000	100	8,610	3	8 67	3	3 75	7	2	3,350	5	5 60
Prussia	200	2	633	1	155	1135	2,235	3	3 25	3	3 25	2	2	500	3	5 00
Denmark	200	2	2,800	2	680	200	5,900	3	7 67	8	3 17	3	1	50	2	7 00
Italy	35	1	1,200	1	900	100	750	1	6 00	2	3 00	1	1	50	2	5 00
West Indies.																
Norway	300	1	1,600	1	300	300	8,700	3	7 00	2	4 00	7	2	4,000	2	5 00
Australia	500					300	1,100	1	10 00	1	4 00	2	1	2,000	2	10 00
Bohemia	200					150	1,100	2	12 50	3	8 67	5	4	2,500	5	5 00
Sweden						680	7,500	1	13 00	3	8 67	5	4	11,000	5	5 00
Alaska						180	12,000			1	4 00	1	1	500		
Albania																
Total	\$109,578	747	\$1,174,620	476	\$260,915	\$111,101	\$2,318,092	1,164	\$7 75	1,139	\$3 74	2,636	856	\$1,276,896	1,117	\$6 55

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Families.						Income and Expenses.					Average years in U. S. of foreign-b. 21 years of age, and over.	
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Number of persons supported by boarding, etc.	Annual Earnings.	Income from other sources.	Total annual income.	Total family expenses.	Family expenses per capita.		
JACKSON.																
United States	240	84	18	138	169	101	87	337	22	\$110,499 25	\$7,177	\$117,646 25	\$63,632	\$144 47	12	
Germany	27	4	1	22	47	27	16	69	2	11,973 00	690	12,662 00	9,122	100 24	12	
England	21	10		11	21	11	8	32		10,451 50	178	10,629 50	5,546	138 98	16	
Canada	16	7		9	7	5	2	19		8,065 20	981	9,008 20	3,986	143 86	12	
Ireland	7			7	19	16	9	26		3,704 90	134	3,838 80	3,353	101 61	21	
Holland	1			1	1	1		2		468 00		468 00	568	184 00	9	
Poland	3	2		1	1	1		3		990 00		990 00	300	100 00	9	
Sweden	1		1						2	225 00		225 00			6	
Scotland	3	2		1	2	2		4		912 80		912 80	450	90 00	23	
Finland	1			1	1	1		2		490 00		490 00	490	163 33	9	
Switzerland	1			1	4	1	1	5		661 50		661 50	550	91 67	6	
Total	331	109	20	192	271	163	123	497	26	\$145,869 65	\$9,180	\$157,579 65	\$92,787	134 67		
JONESVILLE.																
United States	24	9	1	14	25	14	11	40	2	\$9,576 20	\$338	\$9,334 20	\$5,638	104 22		
Canada	2	2								933 50	100	1,063 50				
Holland	1			1	1	1		3		329 00		329 00	329	33 25	10	
Total	27	11	1	15	26	14	11	43	2	\$10,838 70	\$58	\$11,321 70	\$5,937	103 70		

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Homes and savings.						Rent and board.				Life insurance.					
	If foreign born amount of money on arrival in U. S.	Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board including room.	Number taking newspapers and Magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.
JACKSON.																
United States.....		53	\$39,850	30	\$14,915	\$11,063	\$149,435	79	\$3 27	80	\$3 69	191	43	\$37,500	149	\$3 53
Germany.....	\$1,020	7	8,250	5	2,000	650	14,700	12	6 08	5	3 55	20	10	11,700	22	6 33
England.....	276	6	4,830	4	850	450	9,335	7	7 55	6	3 75	13	3	5,100	16	6 88
Canada.....	53	6	7,500	3	2,100	1,040	10,390	3	7 67	6	3 75	13	5	8,000	11	6 09
Ireland.....	168	2	1,600	2	500	200	5,575	5	9 00			6	3	5,000	6	8 00
Holland.....						100	75					1	1		1	6 00
Poland.....	30	1	500			25	850			3	3 33	1		675	3	6 00
Sweden.....							50			1	3 50	1				6 00
Scotland.....							740			1	4 00	1			1	6 00
Finland.....							200	1	7 00			1	1			
Switzerland.....	600	1	1,400	1	100		1,600					1	1	600	1	4 00
Total.....	\$2,176	81	\$113,930	45	\$30,465	\$13,523	\$138,000	107	\$6 00	101	\$3 68	249	71	\$118,575	210	\$6 63
JONESVILLE.																
United States.....		5	\$2,600	1	\$300	\$335	\$10,410	9	\$5 71	11	\$3 26	19	5	\$3,000		
Canada.....							150			2	3 50	1				
Holland.....	\$100						700					1				
Total.....	\$100	5	\$2,600	1	\$300	\$335	\$11,260	9	\$5 71	13	\$3 90	21	5	\$3,000		

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Families.						Number of persons supported by boarding, etc.	Income and expenses.				Average years in U. S. of foreigners 21 years of age and over.	
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Annual earnings.		Income from other sources.	Total annual income.	Total family expenses.	Family expenses per capita.		
KALAMAZOO.																
United States.....	434	190	13	226	302	173	124	544	24	\$171,970 87	\$7,791	\$179,761 87	\$38,981	\$21 83	16	
Germany.....	49	17	1	31	67	43	23	96	1	19,206 90	998	20,204 90	12,473	96 09	14	
Canada.....	24	8	2	14	35	25	20	49	3	11,953 80	238	12,220 30	6,468	102 66	14	
Holland.....	62	25	4	38	77	49	32	109	6	20,909 74	175	21,084 75	12,142	88 50	15	
England.....	12	3	1	6	13	7	7	22	1	5,367 50		5,367 50	2,967	98 90	28	
Ireland.....	13	6		7	19	13	10	26		5,543 90	322	5,864 90	2,726	83 60	15	
Scotland.....	13	7		6	22	13	9	28		4,270 80	575	4,845 30	3,047	89 63	16	
New Zealand.....	1			1	1			2		812 00		812 00	312	104 00	23	
Norway.....	1	1								490 00		490 00				
Sweden.....	1			1	2	1	1	3		432 00		432 00	359	89 75	32	
Italy.....	1			1	3	3	1	4		884 00		884 00	884	76 80	38	
Denmark.....	1			1	1	1		2		386 00		386 00	386	113 00	16	
Switzerland.....	3	1		2	3	1		5		715 06	75	790 06	645	92 14	2	
Total.....	615	253	26	331	544	328	233	892	35	\$241,619 10	\$10,074	\$251,693 10	\$125,990	\$110 94		
LANING.																
United States.....	336	109	7	219	305	200	148	564	12	\$140,148 90	\$7,574	\$147,717 80	\$87,992	\$112 87	9	
Germany.....	138	43	2	94	264	164	104	372	3	47,288 79	3,077	50,365 79	23,537	70 46	9	
Canada.....	23	12	1	20	38	23	15	61	1	14,251 02	1,106	15,357 02	8,783	106 53	16	
England.....	10	5	5	5	15	9	5	21		5,084 70	117	5,201 70	2,500	98 15	23	
Ireland.....	12	5	1	6	16	11	9	21	2	6,080 50	190	6,270 50	2,632	113 03	19	
Denmark.....	2	1	1						1	871 80		871 80	871	87 10	4	
Scotland.....	1			1	2			3		675 00	200	875 00	376	98 75	33	
Sweden.....	1	1								1,000 00		1,000 00			6	
Poland.....	1					4	3	6		812 00		812 00	812	14 57	17	
Switzerland.....	5	2		3	9	4	1	13		2,368 60		2,368 50	1,633	103 21	8	
Totals.....	538	177	13	349	654	415	288	1,061	19	\$318,530 81	\$12,364	\$330,784 81	\$137,514	\$97 53		

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	If foreign born, amount of money on arrival in United States.	Homes and savings.						Rent and board.				Life insurance.					
		Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week, including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.	
KALAMAZOO.																	
United States.....	\$2,632	85	\$103,800	60	\$23,215	\$14,930	\$228,385	124	\$7 89	164	\$3 83	253	57	\$75,110	43	\$3 33	
Germany.....	13	13	13,100	10	4,387	980	26,960	15	7 63	19	8 38	25	16	10,150	16	5 31	
Canada.....	703	4	3,900	3	1,000	1,648	15,870	10	8 10	9	4 50	16	6	5,060	2	4 00	
Holland.....	1,763	19	21,180	13	4,170	1,702	31,875	12	6 32	18	2 58	28	3	5,000	4	6 25	
England.....	160	3	4,700	2	600	225	9,950	5	7 00	4	3 38	11	4	4,050	2	5 00	
Ireland.....	470	5	5,900	4	1,700	259	7,225	2	8 50	5	4 23	9	2	3,000	1	5 00	
Scotland.....	110	2	2,200	2	1,100	140	3,530	4	7 12	3	4 50	8	1	1,000	—	—	
New Zealand.....	—	—	—	—	—	—	200	1	4 50	—	—	—	—	—	—	—	
Norway.....	—	—	—	—	—	—	200	—	—	1	8 60	1	1	2,000	—	—	
Sweden.....	1	1	1,900	1	500	35	1,900	—	—	—	—	—	—	—	—	—	
Italy.....	500	—	—	—	—	—	200	1	6 50	—	—	—	—	—	—	—	
Denmark.....	25	1	50	—	—	—	100	1	5 00	—	—	—	—	—	—	—	
Switzerland.....	—	—	—	—	—	20	300	1	5 00	—	—	—	2	1,000	—	5 00	
Total.....	\$6,667	135	\$156,410	95	\$41,672	\$19,684	\$324,405	176	\$7 63	223	\$3 37	353	92	\$106,380	69	\$5 98	
LANING.																	
United States.....	98	98	\$102,300	69	\$30,100	\$14,638	\$229,632	114	\$7 53	102	\$3 40	248	69	\$130,225	50	\$7 34	
Germany.....	26,245	70	64,375	54	23,380	1,724	72,470	22	6 07	31	8 23	70	35	90,118	49	6 37	
Canada.....	2,909	11	10,775	5	2,011	1,110	23,680	6	8 51	10	8 60	28	4	7,000	9	4 44	
England.....	50	3	2,600	2	750	150	7,150	2	8 00	6	3 73	5	2	2,200	1	10 00	
Ireland.....	530	6	2,750	5	1,075	500	7,150	2	15 00	3	2 93	7	5	7,680	6	6 40	
Denmark.....	110	—	—	—	—	—	2,400	1	8 00	2	4 12	1	—	—	1	6 00	
Scotland.....	900	—	—	—	—	400	2,900	1	—	—	—	—	—	—	—	—	
Sweden.....	200	—	—	—	—	300	300	1	7 00	—	5 00	—	—	—	—	—	
Poland.....	50	8	2,900	2	1,800	375	3,060	—	—	2	3 00	3	8	8,000	8	4 00	
Switzerland.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total.....	\$10,804	190	\$156,500	135	\$3,626	\$19,626	\$345,342	51	\$7 49	161	\$3 39	361	118	\$150,221	118	\$6 40	

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Families.					Number supporting self only.	Number supporting others than self by boarding, etc.	Income and expenses.					Average years in U. S. of foreigners 21 years of age and over.
	Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.			Number of persons supported by boarding, etc.	Annual earnings.	Income from other sources.	Total annual income.	Total family expenses.		Family expenses per capita.
MARSHALL.													
United States.....	27	12	15	19	12	9	85	\$9,795 00	\$120	\$9,915 00	\$5,687	\$113 74	10
Canada.....	2	2	1	2	1		5	494 00		494 00			10
Scotland.....	1							812 00		812 00	312	78 00	25
Total.....	30	14	16	21	13	9	88	\$10,541 00	\$120	\$10,661 00	\$5,999	\$111 09	
MONTAGUE.													
United States.....	27	7	20	45	37	32	65	\$18,099 00	\$276	\$18,375 00	\$13,535	\$147 47	19
Germany.....	14	4	10	26	15	13	37	7,455 00	\$80	7,535 00	5,828	124 00	15
Holland.....	8		8	17	12	10	25	6,267 00		6,267 00	4,760	144 24	15
Canada.....	5		5	11	10	7	17	8,123 00		8,123 00	6,018	137 18	19
Sweden.....	3	1	2	9	8	7	11	1,766 00	196	1,961 00	1,281	98 54	18
Total.....	60	13	48	115	86	74	165	\$37,699 00	\$801	\$38,500 00	\$29,177	\$136 98	
MUSKOGEE.													
United States.....	79	25	53	103	88	76	178	\$52,590 25	\$1,980	\$54,570 25	\$35,090	\$153 97	12
Germany.....	24	8	16	44	39	23	53	14,988 50	537	15,525 50	10,680	144 82	12
Holland.....	13	2	10	24	20	17	34	11,735 50		11,735 50	9,888	133 82	12
Canada.....	11	4	7	25	23	19	32	7,021 00		7,021 00	5,640	119 87	11
Sweden.....	6	1	4	9	8	6	14	3,147 00	200	3,347 00	2,715	150 88	17
Scotland.....	3		2	7	5	5	9	1,455 00		1,455 00	1,366	125 83	8
Norway.....	1		1	2	2	2	3	450 00	150	600 00	630	157 50	18
Switzerland.....	2	1	1	1	1	1	2	1,135 00		1,135 00	830	210 00	7
England.....	1		1	8	3	3	4	864 00		864 00	724	144 80	5
Total.....	149	41	101	238	205	168	363	\$98,456 75	\$3,947	\$98,403 75	\$66,327	\$145 25	

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Homes and savings.						Rent and board.				Life insurance.					
	If foreign born amount of money on arrival in U. S.	Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.
MARSHALL.																
United States.....		2	\$1,600	1	\$500	\$650	\$13,310	12	\$5 98	8	\$3 25	18	4	\$3,828	1	\$5 00
Canada.....						100	500			1	3 50		1	3,000	1	15 00
Scotland.....							800	1	6 00							
Total.....		2	\$1,600	1	\$500	\$750	\$14,610	13	\$5 96	9	\$3 25	19	5	\$3,828	2	\$10 00
MONTAGUE.																
United States.....		14	\$13,100	3	\$500	\$1,665	\$28,060	6	\$6 84	7	\$3 71	23	6	\$11,000	1	\$5 00
Germany.....	\$375	6	4,650	4	700	160	11,590	4	6 75	3	3 53	7	3	2,000	1	5 00
Holland.....	165	4	3,100	2	400	145	7,500	4	7 00			6	1	2,000		
Canada.....	285						3,860	5	6 60			3				
Scotland.....	58					800	2,900	2	8 00	1	3 75	2				
Sweden.....	150	2	1,700	2	500	80	3,600	1	9 00			2	1	2,000		
Total.....	\$860	26	\$21,550	11	\$2,100	\$2,860	\$57,580	22	\$7 00	11	\$3 61	42	10	\$17,000	2	\$5 00
MUSKOGEE.																
United States.....		25	\$44,400	10	\$2,150	\$6,580	\$100,505	18	\$6 61	20	\$3 75	66	27	\$51,000	14	\$5 00
Germany.....	\$1,860	9	8,900	8	500	1,440	25,000	7	9 14	7	3 64	17	4	6,000	7	5 00
Holland.....	1,090	4	2,400	1	200	870	13,295	13	8 50	2	3 50	11	2	2,000	4	5 00
Canada.....	740	2	1,700	2	400	1,075	8,480	5	6 60	4	3 63	9	1	1,000	4	5 00
Scotland.....	563	1	1,400			250	4,300	3	9 33	1	3 50	3				
Sweden.....	85					80	1,100	2	10 00							
Norway.....	150	1	800				1,300					1				
Switzerland.....	80	1	900	1	800	175	1,400			1	3 50					
England.....	600	1	1,200			140	2,300					1				
Total.....	\$4,970	54	\$62,700	17	\$3,550	\$10,310	\$157,580	47	\$6 87	35	\$3 66	108	34	\$90,000	29	\$5 00

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Families.						Income and expenses.					Average years in U. S. of foreign-born 21 years of age, and over.
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Number of persons supported by boarding, etc.	Annual earnings.	Income from other sources.	Total annual income.	Total family expenses.	Family expenses per capita.	
PLYMOUTH.															
United States	80	34	2	44	60	36	25	109	3	\$22,796 85	\$1,348 35	\$21,144 55	\$16,323	\$106 69	13+
Canada	4	2		2	1	1	1	4		2,087 00		2,089 00	907	151 17	13+
Scotland	4	1		1	1	1		2		688 50		688 50	588	196 00	5
France	1			1	1			2		588 00		588 00	588	196 00	5
Ireland	1			1	1	2	2	3		546 00		546 00	546	138 50	36
Total	88	37	2	49	66	39	28	130	3	\$33,656 35	\$1,350	\$35,086 35	\$18,932	\$112 14	
QUINCY.															
United States	41	11	1	29	48	30	26	79	1	\$16,306 70	\$380 50	\$16,686 70	\$11,578	\$107 20	36
England	2			2	2	2	1	4		676 00		1,236 00	970	161 67	36
Germany	1			1	8	2	2	4		663 00		663 00	663	133 60	31
Canada	1			1	2	1		3		516 00	48	564 00	564	141 00	43
Total	45	11	1	33	55	34	29	90	1	\$18,161 70	\$978	\$19,189 70	\$18,775	\$111 99	
SAGINAW.															
United States	38	21		17	29	17	14	46		\$20,493 50	\$204	\$20,697 50	\$10,124	\$160 70	19+
Germany	15	1		14	43	29	21	56		9,293 00	378	9,671 00	8,426	120 37	19+
Canada	8	4		4	6	2	1	10		8,863 00		8,863 00	2,000	143 86	18+
Ireland	1									367 50		367 50			12
Scotland	1									150 00		150 00			
Austria	1									375 00		375 00			7
Total	64	26		35	77	46	36	112		\$34,593 00	\$932	\$35,144 00	\$20,350	\$139 72	

TABLE No. 16.—Continued.—Showing Totals of Nationalities Canvassed.

Nationality.	Homes and savings.						Rent and board.				Life insurance.					
	If foreign born amount of money on arrival in U. S.	Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.
PLYMOUTH.																
United States		14	\$13,800	4	\$1,150	\$4,085	\$42,585	25	\$5 80	28	\$3 01	46	8	\$5,000	12	\$4 50
Canada	\$1,300	1	3,500	1	800	615	4,950	1	5 00	2	3 37	4	1	1,000	1	4 00
Scotland						20	2,500	1	2 50	1	3 00	1				
France							800	1	5 00							
Ireland							600	1	4 00			1				
Total	\$1,300	15	\$15,800	5	\$1,950	\$4,700	\$50,915	29	\$5 14	31	\$3 08	52	4	\$6,000	14	\$4 43
QUINCY.																
United States		8	\$1,850	1	\$300	\$1,075	\$22,850	20	\$5 75	10	\$2 95	33	2	\$4,000	1	\$3 00
England	\$50	1	600				8,400	1	8 00			2	1	1,000		
Germany							800	1	8 50			1	1	1,000		
Canada							1,000	1	6 00							
Total	\$50	9	\$2,450	1	\$300	\$1,075	\$28,050	22	\$5 98	10	\$2 95	36	4	\$6,000	1	\$3 00
SAGINAW.																
United States		9	\$11,600	6	\$1,200	\$1,550	\$24,570	7	\$5 93	14	\$3 55	23	9	\$18,000		
Germany	\$540	9	10,200	6	1,300	150	13,975	5	5 20	1	3 50	9	4	6,700	1	\$5 00
Canada							2,020	3	5 66			3		5,000		
Ireland	100	1	550	1	800		70			1	3 00					
Scotland																
Austria						25	75			1	3 00					
Total	\$680	19	\$22,850	13	\$3,300	\$1,775	\$46,010	15	\$5 63	21	\$3 71	35	16	\$36,700	1	\$5 00

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Families.					Income and expenses.					Average years in U. S. of foreigners 21 years of age, and over.	
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Number of persons supported by boarding, etc.	Annual earnings.	Income from other sources.	Total annual income.	Total family expense.		Family expenses per capita.
TOWNSEK.															
United States.....	32	10	1	21	29	22	17	50	2	\$15,299 02	\$778	\$16,077 02	\$10,146	\$143 90	44
Holland.....	1	1	1	1	4	2	2	5	1	702 00	180	883 00	900	150 00	44
Germany.....	1	1	1	1	3	2	2	4	1	561 60	75	637 20	561	112 20	43
Ireland.....	1	1	1	1	4	3	3	5	1	425 00	75	500 00	400	86 68	23
Austria.....	1	1	1	1	1	1	1	2	1	383 50	75	458 50	324	163 00	38
Canada.....	1	1	1	1	1	1	1	2	1	780 00	780	780 00	780	243 33	30
England.....	1	1	1	1	1	1	1	1	1	414 00	414	414 00	214	107 00	38
Total.....	38	10	1	27	41	29	24	68	2	\$18,584 12	\$1,088	\$19,597 12	\$13,275	\$139 74	
THREE RIVERS.															
United States.....	182	29	1	108	142	97	81	284	1	\$54,486 05	\$3,401	\$58,886 05	\$40,820	\$110 88	36
Germany.....	6	1	1	5	9	6	5	14	1	3,794 80	425	3,219 80	2,223	117 00	
Canada.....	1	1	1	1	3	3	2	4	1	375 00	30	395 00	353	70 60	
Total.....	189	30	1	109	154	106	88	292	1	\$57,634 85	\$3,846	\$60,480 85	\$43,196	\$110 48	
FRANKSBURG.															
United States.....	11	4	1	7	10	5	3	17	1	\$7,201 50	150	7,351 50	\$4,705	\$108 04	19
Germany.....	11	4	1	5	21	20	17	28	1	6,553 00	150	6,703 00	4,406	123 94	11
Holland.....	1	1	1	5	13	10	8	17	1	3,171 00	150	3,321 00	2,030	119 54	11
Canada.....	2	1	1	1	2	2	2	3	1	768 00	75	843 00	460	115 00	8
Poland.....	1	1	1	1	1	1	1	1	1	450 00	450	450 00	450	225 00	19
Sweden.....	1	1	1	2	7	7	5	9	1	1,500 00	150	1,650 00	1,890	123 64	14
Scotland.....	1	1	1	1	2	2	1	3	1	780 00	180	960 00	1,700	175 00	23
Total.....	35	11	1	24	54	46	36	78	1	\$30,410 50	\$480	\$30,890 50	\$14,718	\$144 25	

TABLE No. 18.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Homes and savings.						Rent and board.				Life insurance.					
	If foreign born, amount of money on arrival in U. S.	Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including per room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to small societies.	Average weekly benefit in case of accident or sickness.
TEXARKANA.																
United States		12	\$15,960	5	\$2,530	\$1,335	\$30,935	9	\$5 54	9	\$2 02	27	6	\$20,000	1	\$2 50
Holland		1	1,400	1	200		5,000					1	1	1,000		
Germany		1	1,300			100	1,500					1				
Ireland						40	700	1	12 50			1				
Austria		1	800	1	75		600					1				
Canada		1	1,000			50	600	1	7 00			1	1	2,000		
England		1				200	2,000									
Total		16	\$19,960	7	\$2,805	\$1,745	\$41,835	11	\$6 31	9	\$2 92	33	8	\$23,000	1	\$2 50
TEXARKA RIVERS.																
United States		61	\$48,925	37	\$13,108	\$4,452	\$92,930	36	\$5 84	23	\$2 88	104	20	\$24,400	9	\$6 46
Germany	\$400	4	5,500	1	500	800	10,800	1	4 00			4	2	3,000		
Canada		1	1,800	1	450		1,400					1	1	1,000		
Total	\$400	66	\$56,475	39	\$13,053	\$4,752	\$104,830	36	\$5 79	23	\$2 88	109	23	\$28,400	9	\$6 46
FRANKSBURG.																
United States		5	\$3,800	1	\$300	\$400	\$7,450	2	\$7 50	4	\$2 50				2	\$5 00
Germany	\$385	3	2,100	1	200	625	7,525	4	7 75	4	3 75	7			2	5 00
Holland		2	1,400			60	4,050	3	8 00	1	3 00	5			2	5 00
Canada	100					25	510			1	3 50					
Poland	50						590	1	7 00							
Sweden	150	1	800			65	2,050	1	8 00			2				
Scotland	100	1	900			180	2,200					1			1	5 00
Total	\$1,095	13	\$9,000	2	\$500	\$1,855	\$24,645	12	\$7 68	10	\$3 55	24			7	\$5 00

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Families.						Income and expenses.				Average years in U. S. of foreign-born 21 years of age, and over.	
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Number of persons supported by boarding, etc.	Annual earnings.	Income from other sources.	Total annual income.	Total family expenses.		Family expenses per capita.
GRAND RAPIDS.															
United States.....	416	191	5	220	887	287	202	594	5	\$222,620 58	\$6,316	\$228,936 83	\$119,960	\$147 41	13
Germany.....	138	44	1	94	240	168	139	334	1	75,708 97	2,370	78,078 97	50,008	116 84	13
Holland.....	86	30	1	55	136	94	77	139	1	40,966 80	1,861	42,828 80	27,207	111 50	13
Canada.....	48	12	1	30	63	43	34	92	1	23,835 80	1,065	24,900 80	15,804	129 54	16
Poland.....	9	2	—	7	18	13	11	23	—	4,234 50	490	4,724 50	3,649	114 08	12
Austria.....	11	2	—	9	19	16	11	28	—	7,078 50	520	7,598 50	4,925	133 11	19
Switzerland.....	8	1	—	2	3	8	2	5	—	1,680 00	160	1,840 00	1,295	181 14	20
Finland.....	1	1	—	1	1	3	1	4	—	661 50	—	661 50	461	92 20	6
Russia.....	8	1	—	7	22	17	16	29	—	4,730 00	150	4,880 00	3,943	109 53	17
Denmark.....	2	1	—	1	1	1	—	2	—	1,880 00	—	1,880 00	585	195 00	10
Sweden.....	28	11	—	17	50	36	26	67	—	15,768 60	1,838	17,136 60	9,076	108 04	8
Cuba.....	1	—	—	1	2	—	—	3	—	808 50	480	1,288 50	600	150 00	23
England.....	14	6	—	8	14	18	18	23	—	10,410 12	490	10,900 12	5,150	171 67	11
Ireland.....	11	4	—	7	16	18	11	23	—	5,673 50	785	6,458 50	3,690	123 00	13
France.....	1	1	—	—	—	—	—	—	—	705 00	—	705 00	—	9	9
Norway.....	2	—	—	2	11	5	5	18	—	1,001 00	66	1,067 00	665	66 33	8
Scotland.....	2	1	—	1	4	2	2	5	—	1,212 00	—	1,212 00	650	108 33	7
Total.....	776	807	7	482	999	663	549	1,435	7	\$417,699 12	\$15,959	\$433,658 12	\$248,001	\$180 75	—
GRAND HAVEN.															
United States.....	80	16	—	14	19	12	11	38	—	\$14,010 25	\$390	\$14,870 25	\$8,141	\$173 21	20
Germany.....	8	1	—	7	17	10	9	23	—	4,263 50	—	4,263 50	2,883 50	127 28	10
England.....	4	1	—	3	10	7	4	18	—	2,646 00	560	3,236 00	2,025	126 56	16
Sweden.....	2	—	—	1	3	1	—	5	—	1,062 00	—	1,062 00	920	131 43	10
Canada.....	1	—	—	1	1	—	—	1	—	1,040 00	60	1,100 00	700	850 00	40
Poland.....	1	—	—	1	1	—	—	1	—	468 00	—	468 00	—	225 00	13
Holland.....	1	—	—	1	1	—	—	1	—	468 00	—	468 00	—	225 00	13
Total.....	47	18	—	29	49	30	24	78	—	\$24,013 15	\$1,010	\$25,623 15	\$16,309	\$152 43	—

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Homes and savings.						Rent and board.				Life insurance.					
	If foreign born, amount of money on arrival in U. S.	Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.
GRAND RAPIDS.																
United States.....		130	\$178,850	42	\$14,925	\$24,513	\$436,745	96	\$7 46	140	\$3 64	263	104	\$183,700	91	\$6 73
Germany.....	\$3,760	72	83,760	27	9,725	6,470	137,960	28	5 68	26	8 33	71	28	39,000	50	5 38
Holland.....	2,218	38	42,150	14	5,400	8,567	76,690	15	5 68	20	3 72	40	7	12,000	15	5 00
Canada.....	1,845	17	24,100	5	8,510	1,485	54,275	13	6 35	10	3 50	21	4	9,000	15	5 67
Poland.....	200	5	5,200	2	1,300	200	8,680	2	5 00	1	3 50	4	1	1,000	1	5 00
Austria.....	85	6	7,100	2	350	800	15,000	3	11 33	1	4 00	8	6	10,500	4	8 75
Switzerland.....	50	1	1,500	1	200		2,800	1	10 00			2				
Finland.....							800	1	5 00			1				
Russia.....	340	5	6,460	8	1,850		10,000	2	10 00	1	8 50	7	3	4,500	4	6 25
Denmark.....	200	1	2,000			435	4,900				8 50	2				
Sweden.....	2,130	11	14,050	4	2,450	2,905	27,885	7	6 43	10	3 70	10			6	5 00
Cuba.....		1	3,000				3,500	1	10 00			1				
England.....	1,215	2	3,800			2,160	20,070	6	8 08	5	4 20	9	4	8,000	4	5 00
Ireland.....	153	3	2,550			965	11,150	2	5 00	4	3 63	4			3	5 00
France.....										1	4 00	1				
Norway.....	100						800	2	6 00						1	5 00
Scotland.....		1	900				2,100			1	3 50	1			1	5 00
Total.....	\$1,368	288	\$374,910	100	\$39,710	\$43,900	\$362,745	174	\$7 11	221	\$3 63	445	157	\$267,700	196	\$6 06
GRAND HAVEN.																
United States.....		4	\$3,300	1	\$200	\$1,550	\$13,900	10	\$3 60	5	\$3 50	15				
Germany.....		4	2,800	1	500	450	13,000	3	7 33			5				
England.....	\$310					625	2,700	3	6 33	1	5 00	3				
Sweden.....		2	1,400				1,900					1				
Canada.....		1	700			400	2,600					1				
Poland.....						100					3 50					
Holland.....							800	1	6 00							
Total.....	\$310	11	\$8,200	2	\$700	\$2,125	\$34,675	17	\$6 65	7	\$3 71	23				

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Families.						Income and expenses.					Average years in U. S. of foreigners 21 years of age and over.				
	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Number of persons supported					Annual earnings.	Income from other sources.	Total annual income.		Total family expenses.	Family expenses per capita.		
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.							by boarding, etc.	
HOWELL.																
United States.....	37	6		31	55	39	33	39	\$13,048 45	\$1,050	\$13,098 45	\$10,407	\$28 73	16+		
Canada.....	3	1		2	3	3	3	5	741 00	400	1,141 00	746	106 57	12		
Austria.....	1			1	1			2	189 00	100	289 00	289	96 23	13		
Germany.....	1			1	3	2		4	185 00	40	225 00	225	45 00	24		
England.....	1								262 50		262 50			1		
Total.....	43	8		35	62		36	100	\$13,435 95	\$1,590	\$15,025 95	\$11,667	\$36 42			
ANN ARBOR.																
United States.....	65	28	1	36	55	41	30	95	\$24,249 40	\$2,496	\$26,745 40	\$15,983	\$121 85	17+		
Canada.....	9	3		6	8	6	4	14	4,006 50	210	4,216 50	2,373	118 65	15		
Germany.....	11	2		9	28	23	18	88	3,804 50	1,007	4,811 50	4,069	97 00	18+		
England.....	4			4	6	3	3	10	1,639 60		1,639 60	1,312	98 71	19		
Ireland.....	2	1		1	2		2	3	660 00		660 00	237	59 25	23		
Total.....	91	34	1	56	99	75	57	160	\$34,360 00	\$3,713	\$38,073 00	\$23,974	\$110 99			
ALBION.																
United States.....	128	39	4	85	118	66	48	185	\$54,155 46	\$2,098	\$56,251 46	\$32,218	\$121 12	12+		
Germany.....	55	17	1	37	6	72	46	158	21,960 35	727	22,687 35	14,748	74 09	8		
Switzerland.....	1			1	2	2	2	2	441 00		441 00	400	200 00			
Oceania.....	1			1	1	1			1,127 00		1,127 00	1,000	398 99			
Canada.....	8	2		6	15	11	10	21	4,566 00	170	4,736 00	2,960	110 87	15+		
Scotland.....	1			1	1			1	883 00		883 00	550	275 00	24		
Ireland.....	2	1		1	2	1		1	790 00		790 00	312	156 00	30		
Denmark.....	1			1	1	1	1	3	588 00		588 00	460	115 00	31		
Total.....	197	59	5	133	237	152	107	372	\$64,499 81	\$3,993	\$68,492 81	\$52,663	\$104 29			

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	If foreign born, amount of money on arrival in U. S.	Homes and savings.						Rent and board.				Life insurance.					
		Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.	
HOWELL.																	
United States.....		13	\$10,500	6	\$1,333	\$910	\$24,105	17	\$5 51	5	\$3 40	23	5	\$9,500			
Canada.....							5,300	2	5 36	1	2 50	3	1	1,000			
Austria.....							200	1	4 00			1		2,500	1	\$3 00	
Germany.....		1	600	1	130		800						1				
England.....	\$20					75	75			1	3 00						
Total.....	\$20	4	\$11,100	7	\$1,463	\$985	\$30,430	20	\$5 42	7	\$3 31	24	7	\$13,000	1	\$3 00	
ANN ARBOR.																	
United States.....		15	\$18,350	8	\$4,450	\$1,910	\$41,935	19	\$5 79	16	\$3 00	53	11	\$13,590	9	\$4 00	
Canada.....	\$151	4	4,175	2	700	550	6,975	2	7 25	3	3 17	8	3	3,500	1	5 00	
Germany.....	40	5	5,200	4	1,250	100	7,550	3	4 53			8	3	3,025	3	3 67	
England.....	20	2	1,250	1	700	235	2,250	2	5 25			3	1	1,000	1	4 00	
Ireland.....		1	800	1	300		1,000			1	3 50						
Total.....	\$241	27	\$29,775	16	\$7,400	\$2,785	\$59,890	26	\$5 75	20	\$3 05	72	18	\$21,115	14	\$4 00	
ALBION.																	
United States.....		44	\$69,775	30	\$13,080	\$5,450	\$99,795	39	\$7 30	33	\$3 01	95	43	\$51,500	17	\$6 78	
Germany.....	\$665	25	19,500	20	6,180	1,040	23,680	10	5 00	12	3 00	20	10	19,000			
Switzerland.....	25						2,700	1	6 00			1		2,000			
Ocean.....		1	2,000		300	500	2,700					1	1	2,000			
Canada.....	175	3	6,200	2	1,400	800	8,200	3	7 50	1	3 00	6	4	10,000	2	2 00	
Scotland.....		1	1,500			300	2,375	1	10 00	1	3 50	1			2	6 00	
Ireland.....						100	1,000										
Denmark.....		1	1,600	1	900							1	1	2,000			
Total.....	\$866	75	\$101,025	53	\$21,510	\$8,010	\$142,970	54	\$6 91	46	\$3 02	135	59	\$114,500	21	\$3 64	

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.		Number supporting self only.	Number supporting others than self by boarding, etc.	Families.						Number of persons supported by boarding, etc.	Income and expenses.				Average years in U. S. of foreign-born 21 years of age, and over.
	Number supporting families.	Number of children in families.			Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Annual earnings.	Income from other sources.	Total annual income.		Total family expenses.	Family expenses per capita.			
ADRIAN.																
United States.....	61	22	1	38	48	29	23	91	2	\$24,519 20	\$1,042	\$25,561 20	\$16,838	\$130 33	33	22
Germany.....	10	3		8	23	23	15	40		4,265 00	377	4,642 00	3,811	70 40	15	23
England.....	2			2	7	5	4	9		850 50		850 50	711	64 64	15	22
Ireland.....	2			2	10	4	2	12		520 50	200	720 50	726	51 86	15	22
Total.....	75	24	1	50	97	68	44	152	2	\$30,491 20	\$1,619	\$32,110 20	\$22,086	\$109 34		
BAY CITY.																
United States.....	187	89	8	96	165	112	88	284	6	\$105,731 68	\$2,054	\$107,785 68	\$80,691	\$169 05	13	13
Germany.....	44	14		30	91	60	46	123		23,529 00	855	24,384 00	17,686	114 25	16	16
Scotland.....	13	8		9	23	17	12	31		7,961 50		7,961 50	6,060	151 50	16	16
England.....	21	5	1	15	39	27	22	53	1	13,328 20	680	13,998 20	10,029	127 49	13	13
Sweden.....	5	3		2	6	5	2	8		2,350 50		2,350 50	1,000	100 00	13	13
Nova Scotia.....	2	1		1	3			3		1,503 00		1,503 00	700	175 00	9	9
Canada.....	68	31	1	36	85	61	53	128	2	38,180 10	553	38,742 10	22,688	141 42	14	14
Ireland.....	15	3		12	27	21	17	39		8,710 50	404	9,114 50	6,915	185 89	21	21
France.....	1			1	1	1		2		300 00	180	480 00	459	150 00	4	4
Bohemia.....	1			1	3	3		4		1,103 50		1,103 50	700	140 00	23	23
Holland.....	11	2		9	19	12	9	29		6,109 50	480	6,589 50	5,255	146 92	15	15
Prussia.....	1			1	4	4	3	5		745 80		745 80	700	140 00	34	34
Denmark.....	1			1	1	1	2	3		735 00		735 00	735	122 50	17	17
Switzerland.....	1			1	3	3	2	4		730 00		730 00	700	140 00	11	11
Total.....	370	181	5	214	471	336	289	692	9	\$312,080 26	\$6,076	\$317,086 26	\$194,109	\$148 03		

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	If foreign born, amount of money on arrival in United States.	Home and savings.					Rent and board.				Life insurance.					
		Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.
ADRIAN.																
United States		22	\$24,500	9	\$2,900	\$2,188	\$51,900	15	\$4 97	19	\$2 91	42	10	\$11,810	10	\$8 88
Germany	\$700	4	3,850	1	100	852	6,900	4	4 25	3	2 50	9	4	1,910	4	4 00
England		2	1,500	2	187		1,900					2	2	725	2	4 10
Ireland		1	700				1,560	1	6 00							
Total	\$700	29	\$30,550	12	\$3,187	\$2,520	\$62,550	20	\$4 88	21	\$2 87	55	16	\$14,445	16	\$4 00
BAY CITY.																
United States		40	\$48,900	20	\$7,025	\$12,085	\$183,763	83	\$3 11	78	\$3 65	102	56	\$114,850	26	\$8 81
Germany	\$11,350	18	17,400	6	1,975	980	34,120	12	6 92	13	8 87	21	4	7,000	8	4 50
Scotland		6	5,500	3	700	825	11,150	3	9 00	3	8 00	6	5	9,000	2	4 00
England		7	7,000	4	860	1,140	20,900	8	9 18	7	8 87	15	8	14,000	4	6 75
Sweden	200	2	1,500	1	400	40	2,468			8	8 88	1	1	3,000		
Nova Scotia	50	1	1,500				2,100					1	1	3,000		
Canada	1,480	16	19,000	5	1,550	8,280	51,068	20	6 41	27	3 55	85	14	22,500	4	9 50
Ireland	580	4	4,700	2	150	750	12,350	8	6 50	8	8 66	6	2	4,000	2	14 50
France	50						900	1	4 09							
Bohemia		1	3,000	1	350	100	4,800					1	1	2,000		
Holland		5	4,800	2	400	125	9,575	4	6 50	1	8 50	6	1	1,000	3	6 00
Prussia	575	1	900	1	100		1,800									
Denmark	40	1	900				1,200					1	1	1,000		
Switzerland	100						750	1	10 00			1	1	1,000		
Total	\$18,115	102	\$115,969	45	\$14,100	\$18,515	\$288,370	110	\$7 58	180	\$3 98	197	98	\$175,450	48	\$8 77

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.	Number supporting self only.	Number supporting others than self by boarding, etc.	Families.						Number of persons supported by boarding, etc.	Income and expenses.					Average years in U. S. of foreign-born 21 years of age, and over.	
				Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.	Annual earnings.		Income from other sources.	Total annual income.	Total family expenses.	Family expenses per capita.			
BATTLE CREEK.																	
United States.....	652	161	18	473	674	451	388	1,209	24	\$331,936 34	\$14,686	\$346,621 34	\$217,417	\$128 26	20		
Germany.....	27	3	1	23	35	38	19	62	1	12,406 00	825	12,733 00	9,535	183 15	13		
Canada.....	45	12	1	33	36	38	26	91	1	22,416 50	704	23,120 50	17,131	188 90	18		
England.....	25	3	1	19	20	16	10	43	1	13,636 20	150	13,786 20	8,568	123 10	19		
Ireland.....	22	2	1	20	47	57	29	70	1	10,292 55	1,454	11,746 55	9,409	104 54	17		
Scotland.....	8	1	1	6	12	9	6	17	1	5,099 00	910	6,009 00	3,061	159 17	16		
Switzerland.....	5	1	1	4	3	1	1	7	1	2,941 00	—	2,941 00	1,791	163 31	13		
Russia.....	1	1	1	1	5	5	4	6	—	369 00	—	369 00	—	—	4		
Sweden.....	2	1	1	1	6	4	4	11	—	867 00	—	867 00	470	67 14	4		
Holland.....	5	1	1	5	6	4	—	11	—	3,180 50	—	3,180 50	2,885	149 06	23		
Mexico.....	1	1	1	1	1	—	—	1	—	634 00	—	634 00	574	267 00	26		
Total.....	708	187	21	535	887	599	436	1,543	27	\$363,759 00	\$18,179	\$411,938 09	\$270,756	\$127 29	—		
BUCHANAN.																	
United States.....	26	2	1	23	27	20	19	53	1	\$10,923 06	\$283	11,156 06	\$3,535	\$113 30	—		
COLDWATER.																	
United States.....	157	70	3	84	129	78	58	222	6	\$53,500 30	\$1,788	\$55,288 30	\$30,835	\$100 33	20		
Germany.....	19	4	1	8	25	15	10	33	—	4,773 00	570	5,043 00	3,046	74 34	30		
Canada.....	2	1	1	1	—	—	—	1	—	1,062 00	—	1,062 00	812	156 00	20		
Scotland.....	1	1	1	—	—	—	—	—	—	920 00	—	920 00	—	—	0		
England.....	1	1	1	—	—	—	—	—	—	864 00	—	864 00	—	—	26		
Prussia.....	1	1	1	1	2	2	—	3	—	266 00	75	333 00	358	56 35	43		
Poland.....	1	1	1	—	—	—	—	—	—	141 00	—	141 00	—	—	26		
Russia.....	1	1	1	—	—	—	—	—	—	80 00	—	80 00	—	—	4		
Ireland.....	3	1	1	3	6	5	3	9	—	1,553 00	100	1,653 00	1,442	120 16	24		
Total.....	179	79	8	97	162	100	71	268	6	\$60,830 30	2,453	\$63,303 30	\$35,090	\$98 33	—		

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	If foreign born amount of money on arrival in U. S.	Homes and savings.					Rent and board.				Life insurance.						
		Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.	
BATTLE CREEK.																	
United States.....		243	\$345,175	158	\$72,855	\$32,214	\$623,285	223	\$7 54	162	\$3 24	521	388	\$446,400	288	\$6 43	
Germany.....	\$100	11	11,450	8	3,135	750	21,430	12	6 90	4	3 50	19	8	7,050	7	4 57	
Canada.....	3,330	12	15,550	7	4,350	1,045	26,730	21	8 41	10	3 80	36	20	19,200	14	7 00	
England.....	505	8	10,250	6	3,390	2,039	17,230	10	7 45	6	3 48	23	17	21,250	13	6 62	
Ireland.....	800	15	20,300	6	2,100	900	27,500	5	7 20	2	3 25	16	10	7,750	11	6 18	
Scotland.....	320	4	8,000	3	3,060	1,320	12,530	2	6 00	2	3 50	8	6	14,400	5	6 00	
Switzerland.....	30	3	2,215	2	565	425	4,900	1	8 00	1	3 50	5	5	4,600	6	7 00	
Russia.....						85	130										
Sweden.....	235		8,700	1	150	400	325	1	6 00	1	4 00	1	1	100	1	7 00	
Holland.....		3				50	8,000	2	9 30			5	3	6,100	1	7 00	
Mexico.....							1,000		6 00								
Total.....	\$4,820	299	\$416,640	191	\$89,585	\$39,228	\$743,890	278	\$7 56	189	\$3 27	634	408	\$526,350	295	\$6 41	
BROOKMAN.																	
United States.....		11	\$10,480	8	\$318	\$756	\$21,715	10	\$4 90	2	\$3 50	22	4	\$9,000			
COLDWATER.																	
United States.....		28	\$26,200	17	\$318		\$70,470	51	\$8 48	61	\$2 97	97	21	\$31,448	6	\$4 00	
Germany.....	\$170	7	6,900	6	\$2,430	\$2,777	9,575	1	4 00	3	2 83	8			1	4 00	
Canada.....					1,450	425	2,380	1	6 00	1	8 00	2					
Scotland.....						238	600										
England.....						100	200										
Prussia.....							150										
Poland.....		1	1,800				2,000										
Russia.....																	
Ireland.....	15	2	2,300	1	200		50	1	6 00	1	3 00	2					
Total.....	\$158	38	\$37,200	24	\$7,090	\$4,535	\$86,245	54	\$9 42	68	\$3 98	109	21	\$31,448	7	\$4 00	

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Number canvassed.		Number supporting self only.		Number supporting others than self by boarding, etc.		Families.					Number of persons supported by boarding, etc.		Income and expenses.					Average years in U. S. of foreign-born 21 years of age, and over.
							Number supporting families.	Number of children in families.	Number of children of school age.	Number of children attending school.	Number of persons supported in families.			Annual earnings.	Income from other sources.	Total annual income.	Total family expenses.	Family expenses per capita.	
DOWAGIAC.	149	45	2				102	121	72	56	241	3		\$31,391 26	\$1,571 72	\$32,962 26	\$47,802	\$159 26	9
United States	1						1	4			1			135 50		607 50	532	266 00	38
Sweden	2						2	1	3	8	6			1,892 00		1,892 00	1,052	186 50	37
England	3	2					1	7			1			2,434 00		2,434 00	514	257 00	18
Ireland	3						3	5	5	4	10			2,544 00		2,544 00	2,293	176 88	17
Scotland	14	3	1				10	25	17	14	37	1		7,760 00	405 7	7,767 00	4,564	97 10	17
Germany	6						6	12	10	8	18			3,236 50	405	3,631 50	3,001	125 04	21
Canada																			
Total	178	50	3				125	169	107	85	314	4		\$39,133 26	\$2,065	\$101,638 26	\$59,798	136 21	---

TABLE No. 16.—CONTINUED.—Showing Totals of Nationalities Canvassed.

Nationality.	Homes and savings.										Rent and board.				Life insurance.			
	If foreign born amount of money on arrival in U. S.	Number owning homes.	Total value of homes.	Number having indebtedness on homes.	Total indebtedness on homes.	Savings on hand or at interest.	Total present worth.	Number renting homes.	Average monthly rental.	Number boarding.	Average cost per week for board, including per room.	Number taking newspapers and magazines.	Number having life insurance.	Total amount of life insurance.	Number belonging to benefit societies.	Average weekly benefit in case of accident or sickness.		
DOWAGIAC.																		
United States.....		44	\$53,500	28	\$14,670	\$10,470	\$113,170	51	\$6 42	43	\$3 38	117	67	\$78,435	49	\$7 54		
Sweden.....		1	500	1	700	1,800	2,300	1				1	1	2,000	1	21 00		
England.....		2	2,000	1	150	600	2,300	2		2	4 25	2	2	4,600	2	11 00		
Ireland.....		1	800	1	150	600	2,300	1	6 50			3	3	600	3	8 86		
Scotland.....	\$120	2	2,300	2	1,150	100	2,600	1	6 50			3	3	2,610	3	8 86		
Germany.....	800	8	7,150	8	2,452	470	10,470	2	5 25	8	3 16	9	9	13,800	9	8 00		
Canada.....		4	3,600	1	174	100	5,650	2	4 00			6	6	4,500	2	8 50		
Total.....	\$920	62	\$62,750	41	\$19,298	\$11,740	\$137,670	56	\$6 31	48	\$3 41	141	87	\$104,335	66	\$7 65		